ORDER NO. MD9905090C2

Service Manual

Digital Surround Processor

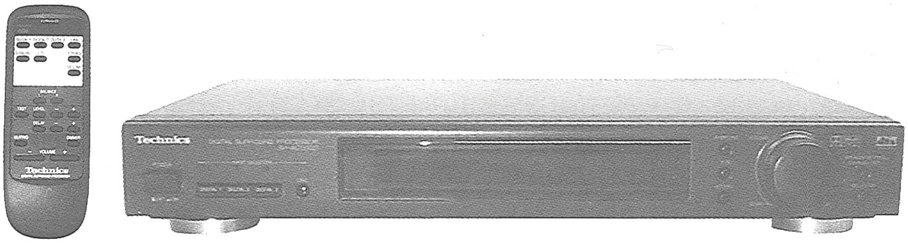
Processor

DOLBY SURROUND PRO · LOGIC

DOLBY DIGITAL

DIGITAL dts SURROUND

SH-AC500D



Colour

(K) ..... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	

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DTS Inc. USP No. 5, 451, 942.

■ Specifications

■ AUDIO

Frequency response	
FRONT L/R, CENTER, SURROUND L/R (LARGE)	20 Hz-20 kHz, ±1 dB
Outlet voltage/Impedance	2 V (at 0 dB)/1 kΩ
Input impedance	
LINE	22 kΩ
COAXIAL	75 kΩ
Delay time	
DOLBY DIGITAL	
CENTER	0 – 5 ms
SURROUND L/R	0 – 15 ms
DOLBY PRO LOGIC	
SURROUND L/R	15 – 30 ms
Total harmonic distortion	
FRONT L/R (1 kHz, 0 dB, PCM)	0.007%
Dynamic range	96 dB
S/N (IHF-A)	100 dB
Load impedance	More than 10 kΩ

■ GENERAL

Power supply	AC 230 - 240 V, 50 Hz
Power consumption	18 W
Dimensions (W X H X D)	430 X 69.4 X 301.4 mm
Weight	2.6 kg

Notes :

Specifications are subject to change without notice.

Weight and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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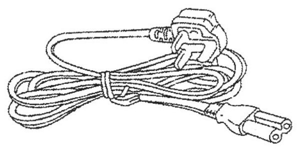
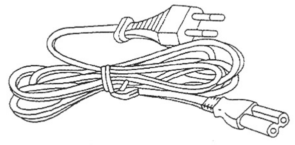
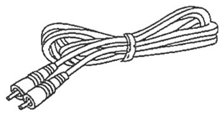
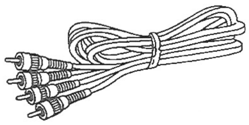
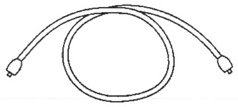
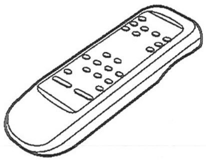
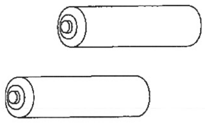
Accessories

 AC power supply cord for United Kingdom	 AC power supply cord for Others	 Monaural connection cables	 Stereo connection cables
 Optical-fiber cable	 Remote control unit	 Batteries	

Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark ◇ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION !
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

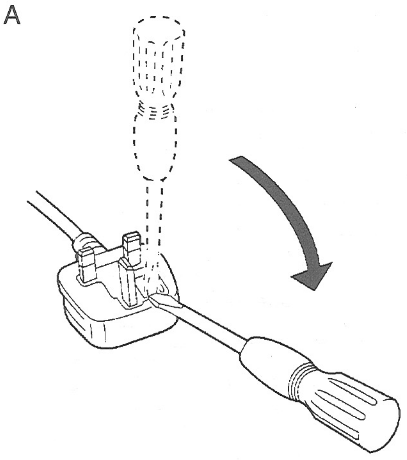
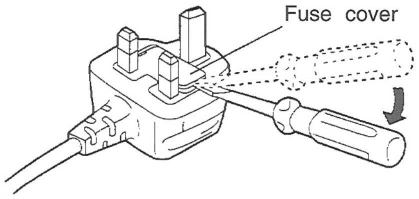


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

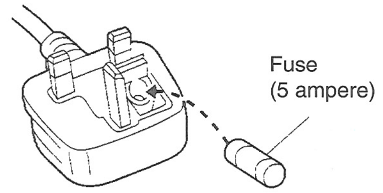
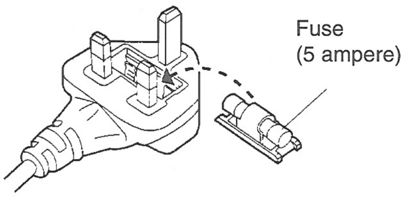
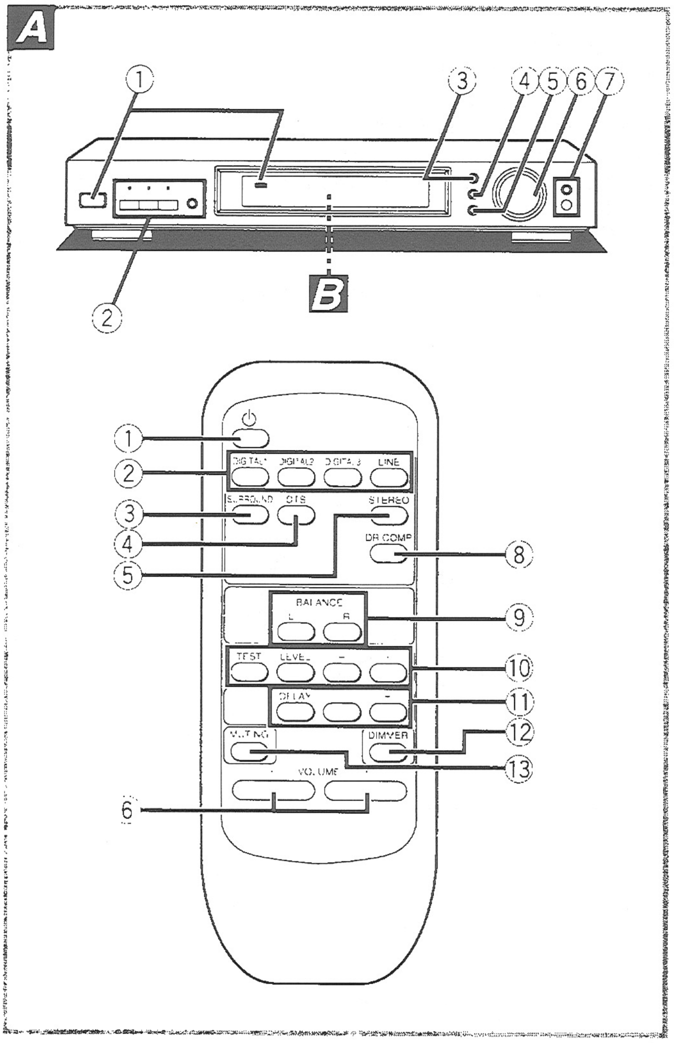
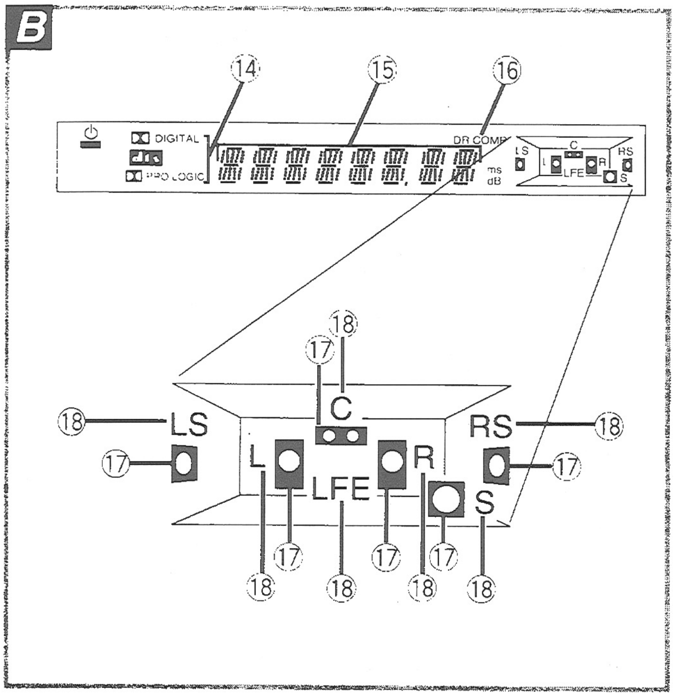


Figure B



Front panel controls


A
①
③
④⑤⑥⑦
②
B
⏻
DIGITAL1
DIGITAL2
DIGITAL3
LINE
SURROUND
DTS
STEREO
DR COMP
BALANCE
L
R
TEST
LEVEL
–
+
DELAY
–
+
MUTING
DIMMER
VOLUME
①
②
③
④
⑤
⑧
⑨
⑩
⑪
⑫
⑬
6


B
⑭
⑮
⑯
⏻
DIGITAL
dts
PRO LOGIC
DR COMP
ms
dB
LS
C
RS
L
LFE
R
S
⑱
⑰
⑱
⑰
LS
C
RS
⑱
⑰
L
LFE
R
S
⑰
⑰
⑰
⑱
⑱
⑱
⑱

Control section A

① Unit on/off button (▬ ⏻ ▬ ⏻/I) and remote standby indicator (⏻)

Use this button to turn the unit on and off.

▬ (off): The unit is in standby mode.

▬ (on): The unit is on. The unit can be turned on and off with the remote control. When the unit is turned off with the remote control it is in remote standby and the indicator lights.

The unit is still using a small amount of power in the standby and remote standby conditions. Standby uses less power.

When the unit is connected to the AC mains lead, this indicator lights up in standby mode and goes out when the unit is turned on.

② Input select buttons/indicators (DIGITAL 1, DIGITAL 2, DIGITAL 3, LINE)

③ Surround mode button (SURROUND)

④ Digital Theater Systems mode button (DTS)

⑤ Stereo mode button (STEREO)

⑥ Volume control (VOLUME)

Main unit only

⑦ Speaker setting buttons (CHANNEL/SET, SELECTOR)

Remote control only

⑧ Dynamic range compression button (DR COMP)

⑨ Balance control (L, R)

⑩ Output level setting buttons (TEST, LEVEL, –, +)

⑪ Delay time setting buttons (DELAY, –, +)

⑫ Dimmer button (DIMMER)

⑬ Muting button (MUTING)

Display section B

⑭ Surround format indicators (DD DIGITAL, dts, DD PRO LOGIC)

⑮ Display

⑯ Dynamic range compression indicator (DR COMP)

⑰ Speaker indicators

Light in accordance with the speaker setting, and each of the indicators corresponding with the speaker concerned flashes when;

- the type or presence of that speaker is set,
- the test signal is output from that speaker,
- the output level or delay time of that speaker is adjusted.

⑱ Signal format indicators (LS, C, RS, L, R, S, LFE)

These indicators light up to indicate the Dolby Digital or DTS input signal format.

LS: Surround speaker (left)
C: Center speaker
RS: Surround speaker (right)
L: Front speaker (left)
R: Front speaker (right)

"S" represents the mono surround and "LFE" (Low Frequency Effect) is a channel for the deep-bass effect in the low frequency range.

Connections

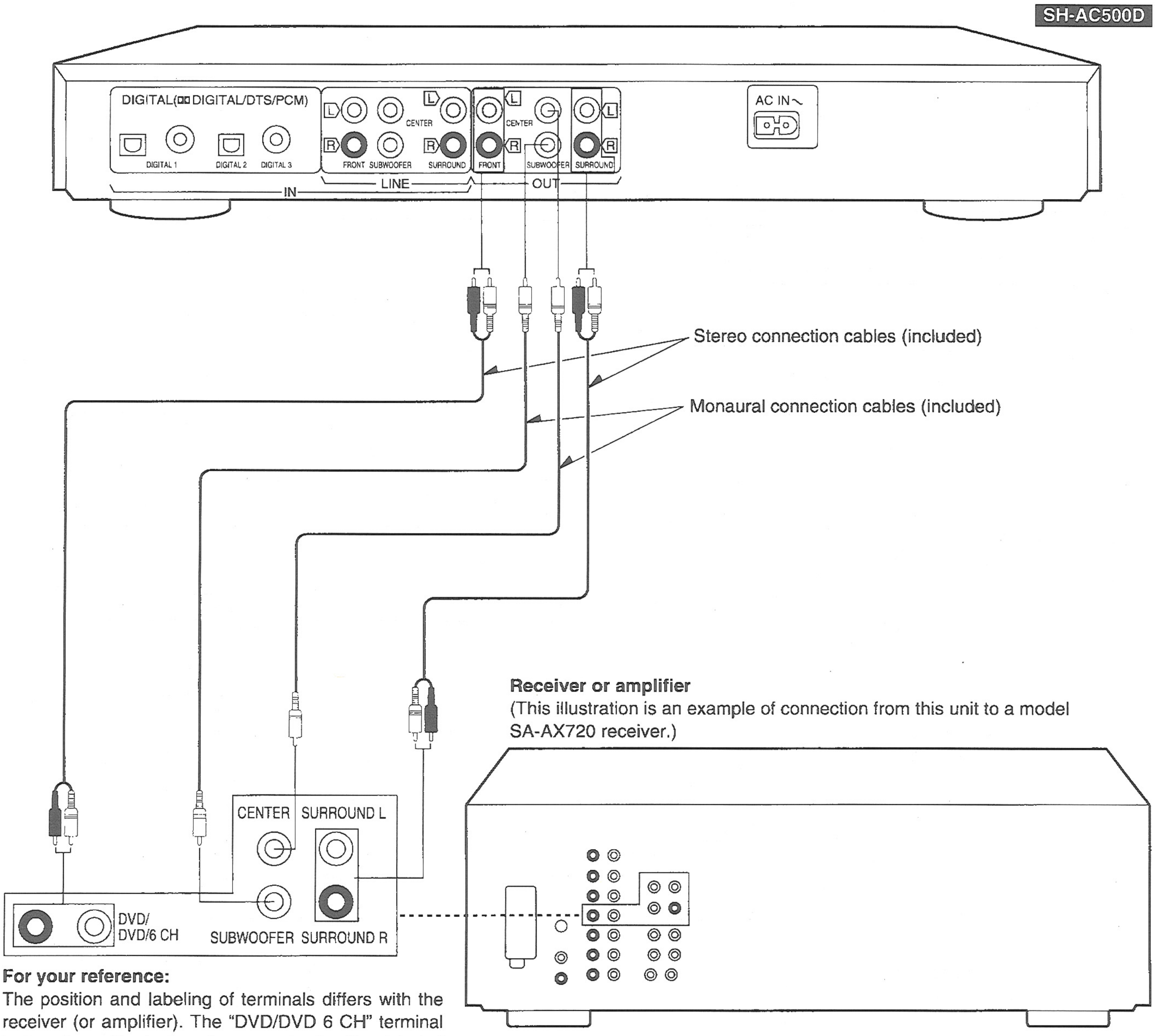
Before proceeding with the connections, ensure that the power to all the units has been turned off.
Connect the AC power supply cord only after all other cables and cords are connected.

Stereo connection cable

White (L)
Red (R)

Connection to a receiver or amplifier

Connection to a receiver (or amplifier) with 6 channel discrete input terminals


SH-AC500D
DIGITAL(DD DIGITAL/DTS/PCM)
DIGITAL 1
DIGITAL 2
DIGITAL 3
IN
L
R
CENTER
FRONT
SUBWOOFER
SURROUND
LINE
OUT
AC IN~
CENTER
SURROUND L
DVD/
DVD/6 CH
SUBWOOFER
SURROUND R

Stereo connection cables (included)

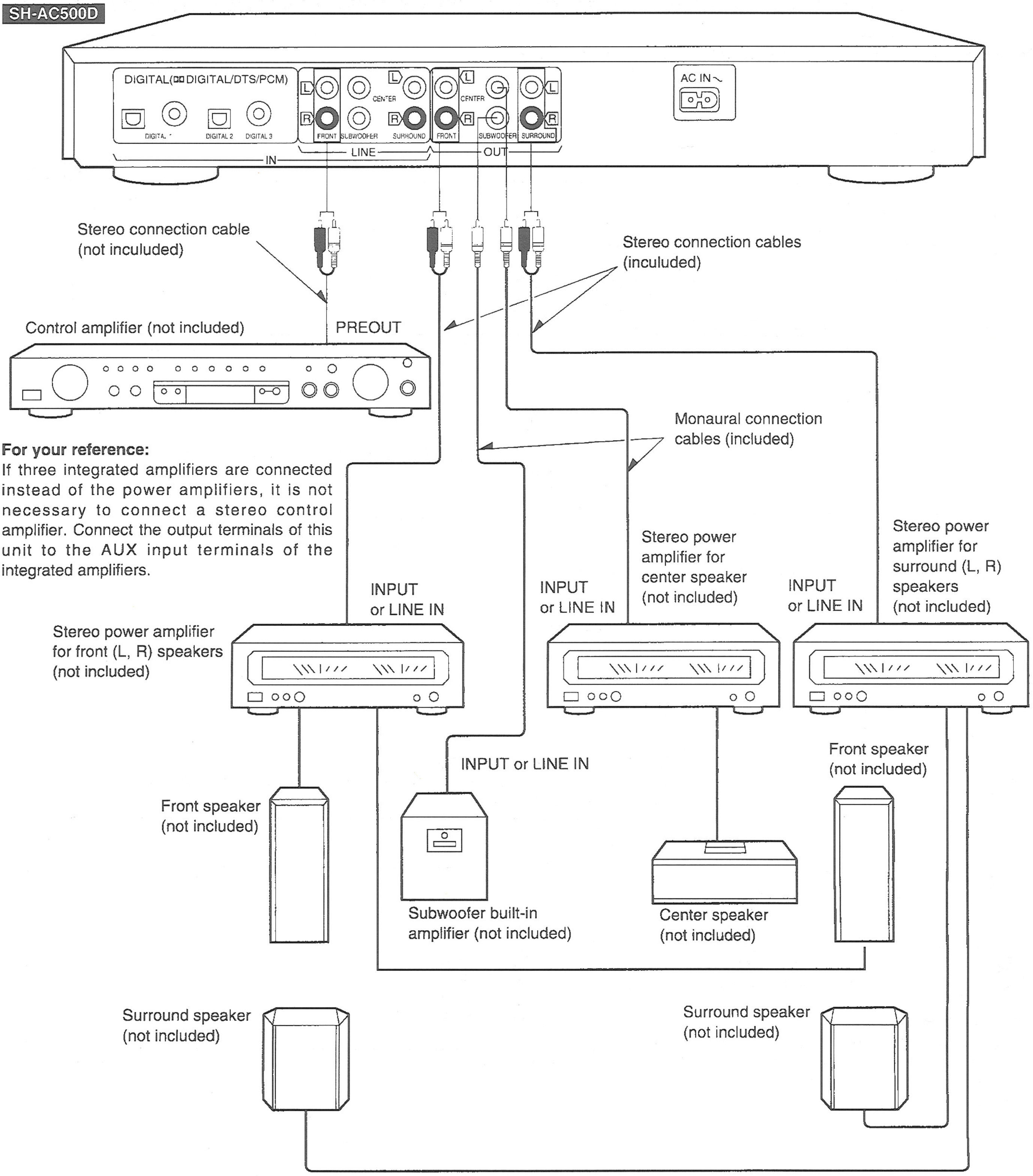
Monaural connection cables (included)

Receiver or amplifier
(This illustration is an example of connection from this unit to a model SA-AX720 receiver.)

For your reference:
The position and labeling of terminals differs with the receiver (or amplifier). The "DVD/DVD 6 CH" terminal in the above illustration, for example, is often labeled as "FRONT (L, R)."

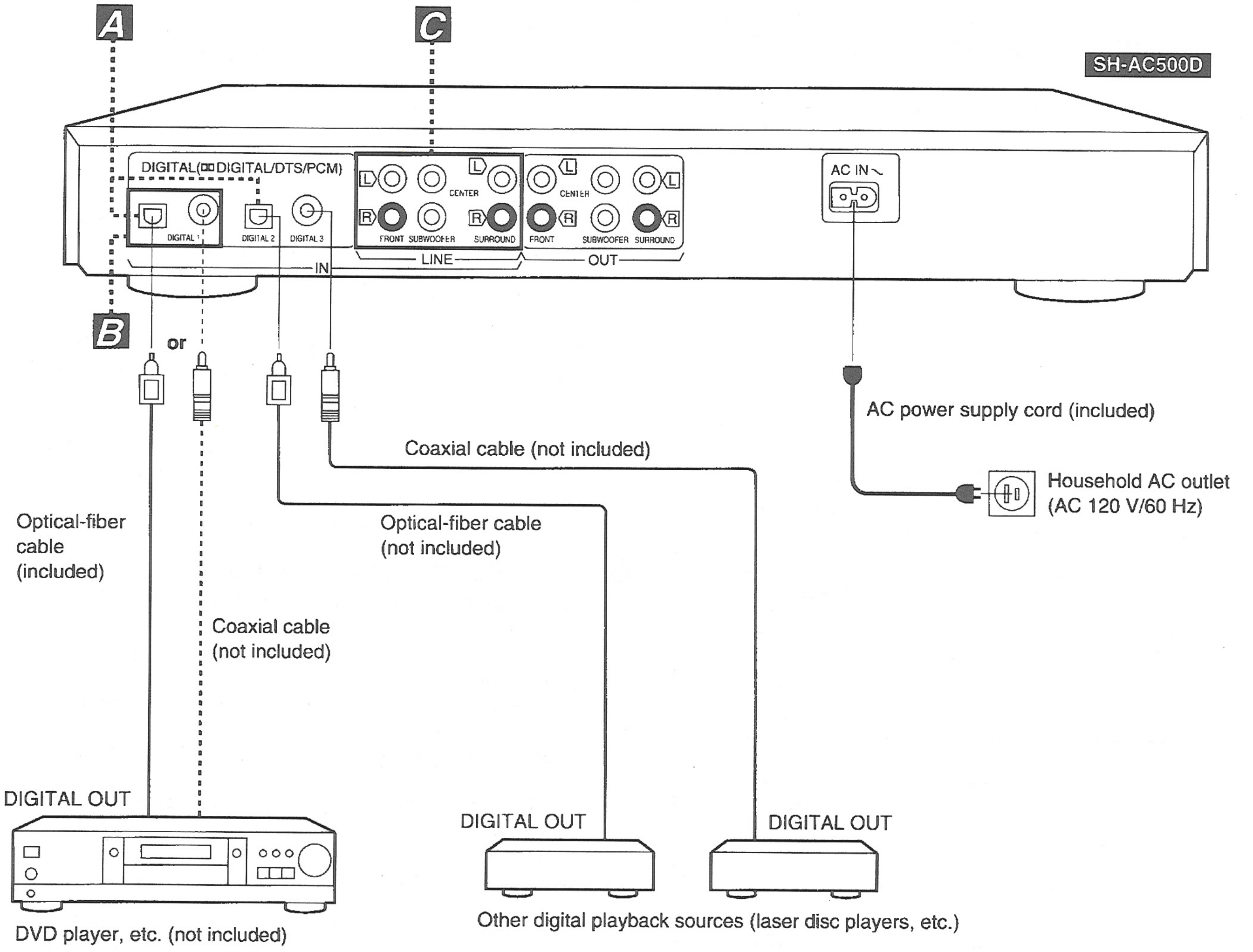
Connections for outputting the 6 channel signals through 3 power amplifiers

This illustration is an example of connection from this unit to a stereo control amplifier of model SU-C1000 and three stereo power amplifiers of model SE-A1000.

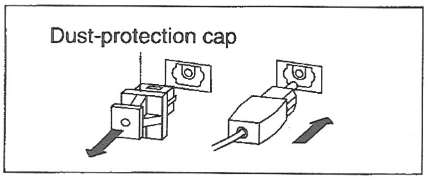

SH-AC500D
DIGITAL(DD DIGITAL/DTS/PCM)
DIGITAL 1
DIGITAL 2
DIGITAL 3
IN
L
R
CENTER
FRONT
SUBWOOFER
SURROUND
LINE
OUT
AC IN~
Stereo connection cable
(not inculuded)
Stereo connection cables
(inculuded)
Control amplifier (not included)
PREOUT
Monaural connection
cables (included)
INPUT
or LINE IN
Stereo power amplifier
for front (L, R) speakers
(not included)
INPUT
or LINE IN
Stereo power
amplifier for
center speaker
(not included)
INPUT
or LINE IN
Stereo power
amplifier for
surround (L, R)
speakers
(not included)
INPUT or LINE IN
Front speaker
(not included)
Subwoofer built-in
amplifier (not included)
Center speaker
(not included)
Front speaker
(not included)
Surround speaker
(not included)
Surround speaker
(not included)

For your reference:
If three integrated amplifiers are connected instead of the power amplifiers, it is not necessary to connect a stereo control amplifier. Connect the output terminals of this unit to the AUX input terminals of the integrated amplifiers.

Connections to audio-visual equipment and the AC power cord


A
C
SH-AC500D
DIGITAL(DD DIGITAL/DTS/PCM)
DIGITAL 1
DIGITAL 2
DIGITAL 3
IN
L
R
CENTER
FRONT
SUBWOOFER
SURROUND
LINE
OUT
AC IN~
B
or
AC power supply cord (included)
Coaxial cable (not included)
Household AC outlet
(AC 120 V/60 Hz)
Optical-fiber cable
(included)
Optical-fiber cable
(not included)
Coaxial cable
(not included)
DIGITAL OUT
DIGITAL OUT
DIGITAL OUT
DVD player, etc. (not included)
Other digital playback sources (laser disc players, etc.)

Connection for optical-fiber cable A


Dust-protection cap

Note

- Do not bend the optical-fiber cable at a sharp angle.
- If the digital optical connector is not going to be used, be sure to attach the dust-protection cap to prevent exposure to dust.

“DIGITAL 1” terminals B

Disconnect the coaxial cable from the DIGITAL 1 terminal when using an optical fiber cable. Only the coaxial cable is recognized if both types are connected.

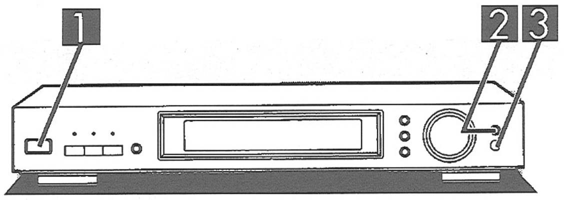
“LINE IN” terminals C

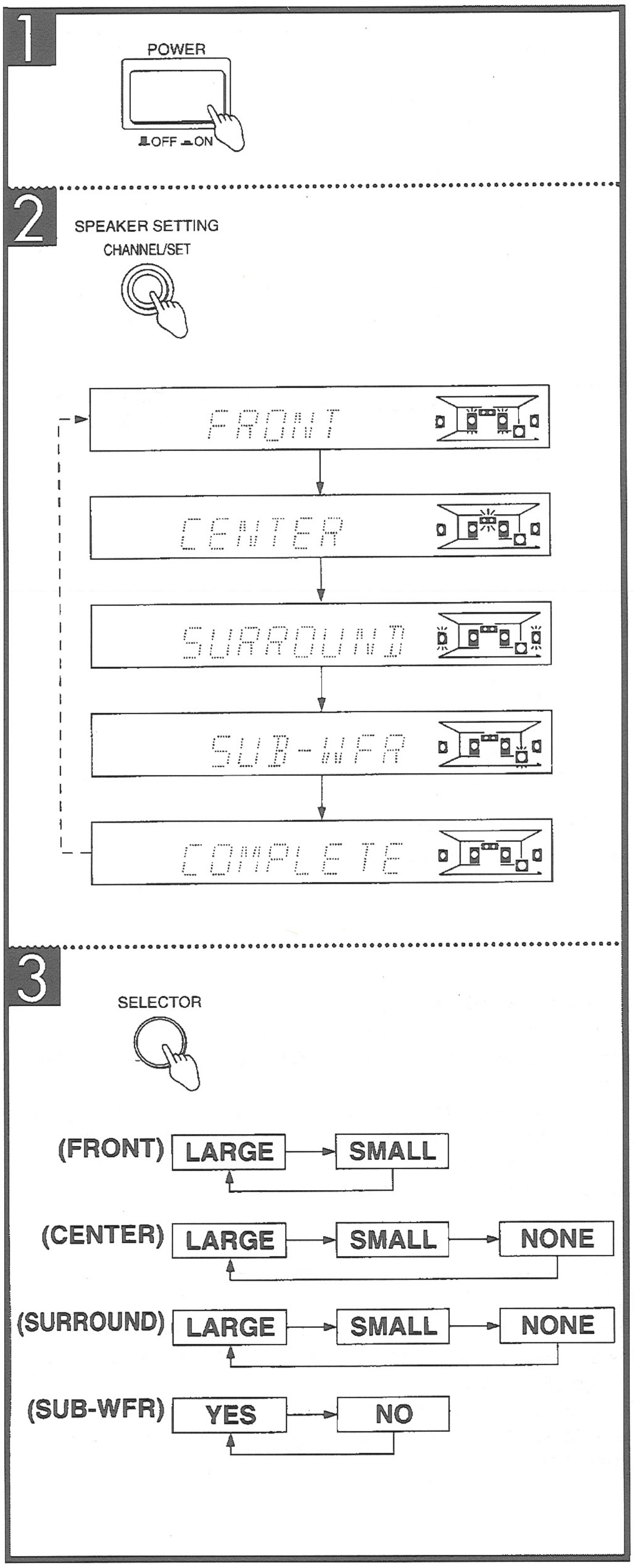
(Only if a control amplifier has not been connected.)
You can connect a set-top box tuner for digital television or similar decoder.
If “LINE” is selected with the input selector on this unit, the signals received through these terminals are output as they are without passing through any sound control circuits (i.e. no volume or other sound adjustments can be made with this unit.)

Note

- Dolby Digital RF (radio frequency) signals cannot be decoded with this unit even if a unit that has Dolby Digital RF output terminals is connected to this unit.
- **Turn off the power to this unit if unusual hissing or beat sounds are heard while listening to FM, AM, or television broadcasts.**

Speaker setting





Set the types and presence of the speakers before enjoying the sound by reproducing the input source.

Before proceeding:
Check the frequency range of each speaker to be used. Consider speakers capable of playing back low frequency sounds (below around 100 Hz) as LARGE. Consider speakers not capable of playing back low frequency sounds as SMALL.

1 Press POWER.

2 Press CHANNEL/SET, and select the channel for which the speaker is to be set.

Each time the button is pressed, the channel display is switched in the listed order.

FRONT: Front speakers **CENTER:** Center speaker
SURROUND: Surround speaker **SUB-WFR:** Subwoofer
COMPLETE: Select this when you have completed the settings.

The selected channel is shown on the display for approx. 2 seconds. The current setting for that channel is then shown as a flashing display. The indicator corresponding to the selected speaker also continues to flash.

3 Press SELECTOR, and set the type (LARGE, SMALL) and presence (YES, NO or NONE) of the speaker.

Each time the button is pressed, the display is switched in the listed order.

LARGE: select if the speaker can produce low frequency sounds,
SMALL: select if the speaker cannot produce low frequency sounds,
NONE: select if you are not using a center speaker or surround speakers,
YES: select if you are using a subwoofer,
NO: select if you are not using a subwoofer.

The sound for speaker channels that are set to "NONE" or "NO" are output from the front speakers. DTS format software, however, depends upon all channels being operable, and so the sound for speakers not connected is not heard at all, no matter what settings are made.

4 Repeat steps 2 and 3 to complete the settings for all the channels.

5 Press CHANNEL/SET to select "COMPLETE".

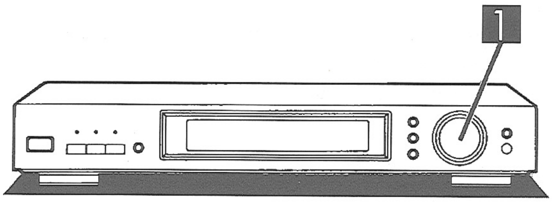
The settings are now entered into the unit's memory. The display goes out after about 2 seconds and the previous display reappears.
The speaker indicators light up unless "NONE" or "NO" has been selected for the corresponding channel.

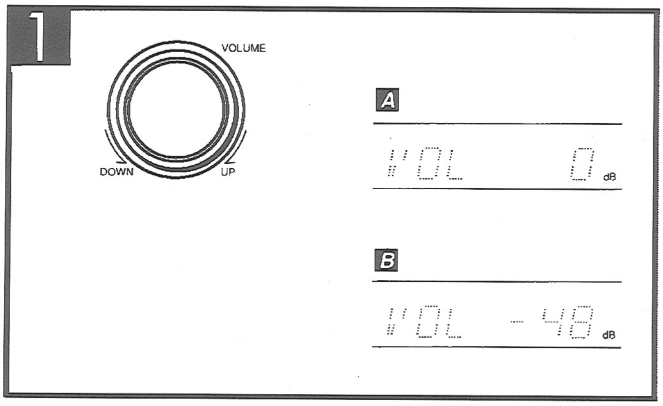
Note

If no buttons are pressed for approx. 10 seconds during the setting process, all previous settings are canceled, the setting mode is released, and the original display is restored.
Begin the setting process again if this occurs.

For your reference:
The setting remains as it is until changed by the above procedure, even after the power has been turned off.

Speaker output adjustments





Set the initial output level first, then proceed to adjust the output level for each speaker channel.

Setting the initial volume level

When this unit is connected to a receiver (or amplifier) that has 6 channel discrete input terminals:

1 Set the volume level to 0 dB using this unit's VOLUME control. A

2 Set the volume control of the receiver (or amplifier) to the position normally used for enjoying the source.

If the test signal, described below in "Speaker output adjustment", is too soft, adjust the volume on the receiver (or amplifier).

Note

If the input level to the receiver (or amplifier) is too loud, lower the volume level using this unit's VOLUME control.

When this unit is connected to three standard stereo amplifiers:

1 Set the volume level to around –48 dB using this unit's VOLUME control. B

(If this unit is connected to three integrated amplifiers:)

2 Set the volume control of the integrated amplifiers to the position normally used for enjoying the source.

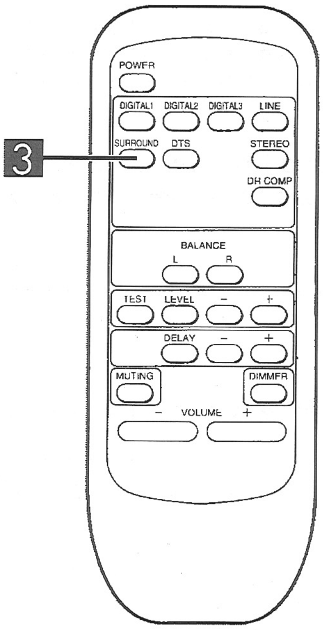
If the test signal, described below in "Speaker output adjustment", is too soft or too loud, adjust the volume on this unit.

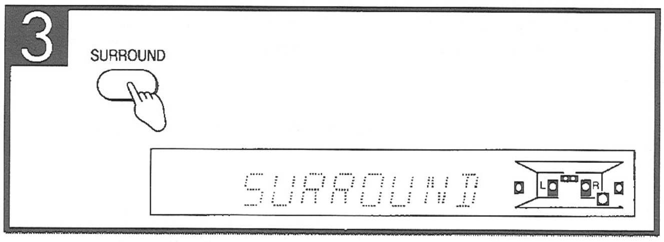
Adjust the output level of each speaker **Remote control only**

Use the test signal to adjust the output level of the center speaker, surround speakers and subwoofer.

Note

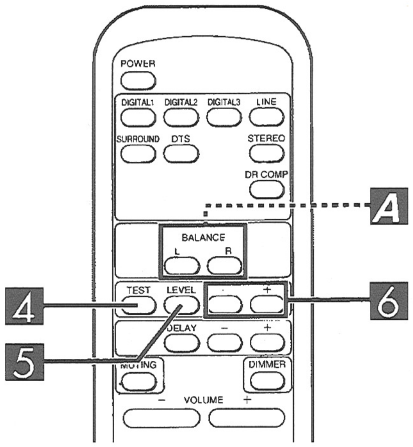
If the output from the front speakers is unbalanced, make balance adjustments on the receiver or amplifier before continuing with the following. (Refer to the instruction manual of the component.)
If the receiver or amplifier cannot be used to make balance adjustments, they can be made on this unit.

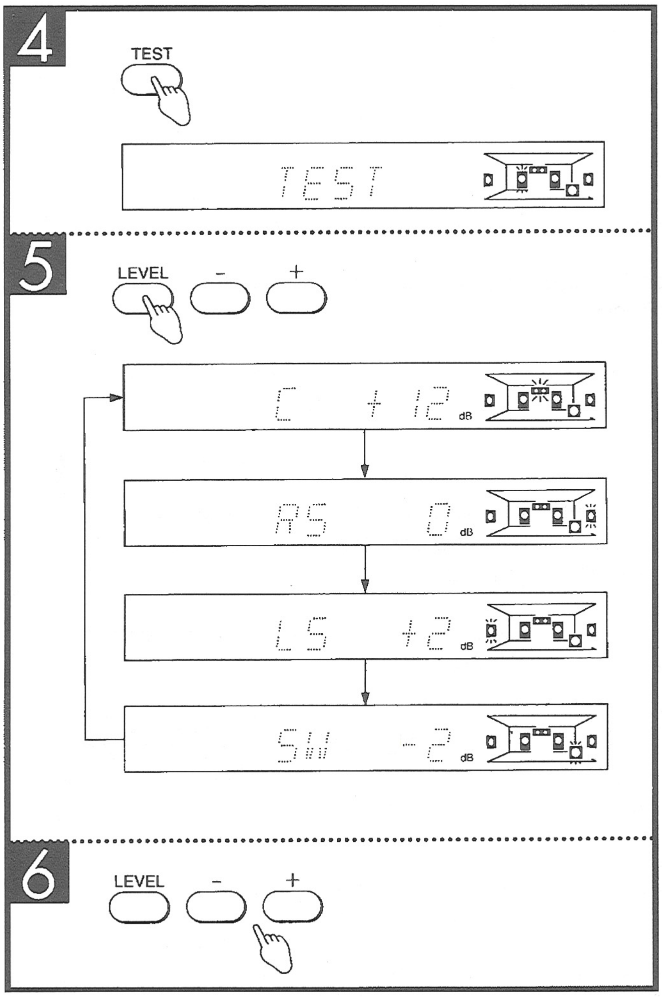


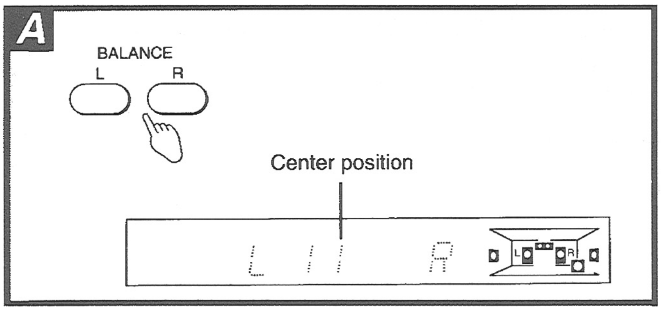


3 Press SURROUND to select the surround mode.
"SURROUND" appears on the display.

(Continued on next page)







4 Press TEST to output the test signal.

"TEST" appears on the display, and the speaker indicator corresponding to the speaker whose outputting sound flashes.
The test signal is automatically output from each speaker for 2 seconds in the following sequence:

L → C → R → RS → LS → SW

L: Front speaker (left)
C: Center speaker
R: Front speaker (right)
RS: Surround speaker (right)
LS: Surround speaker (left)
SW: Subwoofer
(Speakers for which NONE or NO has been set are skipped.)

Note

If the left and right front speaker balance is poor, do not proceed with the next step until balance has been improved with the procedure described below (A).

5 Press LEVEL to select the speaker channel to adjust.

The output level appears on the display, and the speaker indicator for the selected speaker flashes.

Each time the button is subsequently pressed, the speaker whose level is to be set is selected in the listed sequence.
(Speakers for which NONE or NO has been set are skipped.)

6 Press LEVEL [–] or [+] to adjust the output level.

Channels C, RS, LS, and SW can be adjusted between –12 dB and +12 dB. Set them so that the output from each channel appears to be the same as that from the front speakers.

7 Repeat steps 5 and 6 to adjust the output of each channel to approximately the same apparent level.

To stop the test signal

Press TEST.

Using this unit to adjust the balance of the left and right front speakers A

Make the adjustments while listening to the test signal put out in step 4 above.

Press BALANCE [L] or [R] on the remote control to adjust the level balance.

The left/right balance appears on the display.

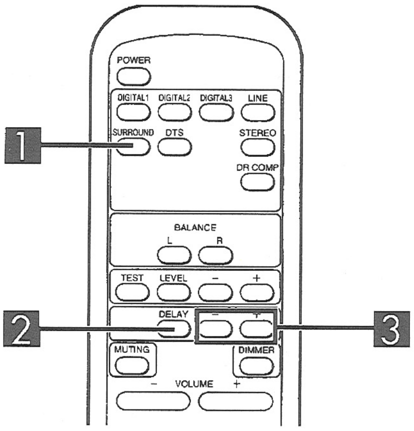
Each time the button is subsequently pressed, the output level of the front speaker opposite to the button pressed is decreased. (i.e. when the L button is pressed, the output level of the R speaker is decreased.)

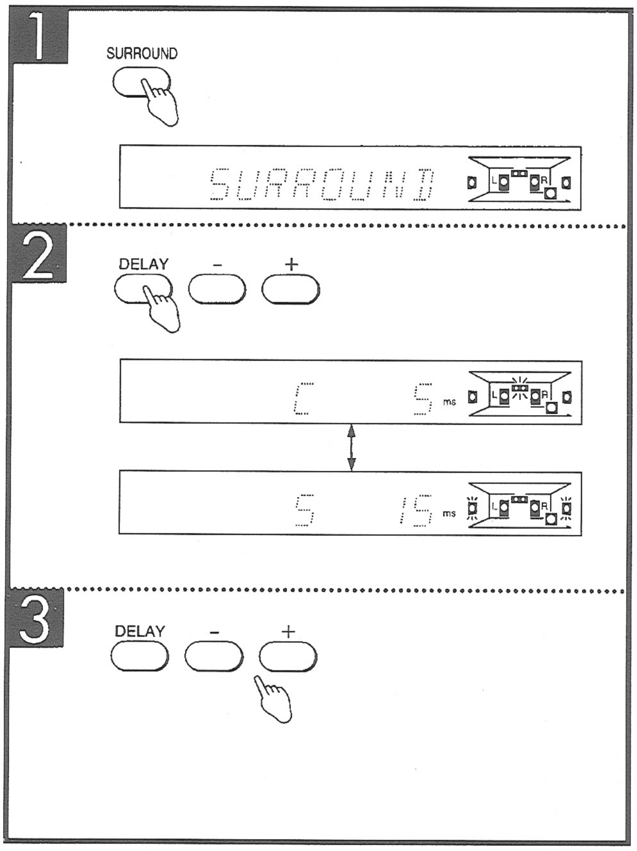
The original display is restored if a button isn't pressed for 4 or more seconds.

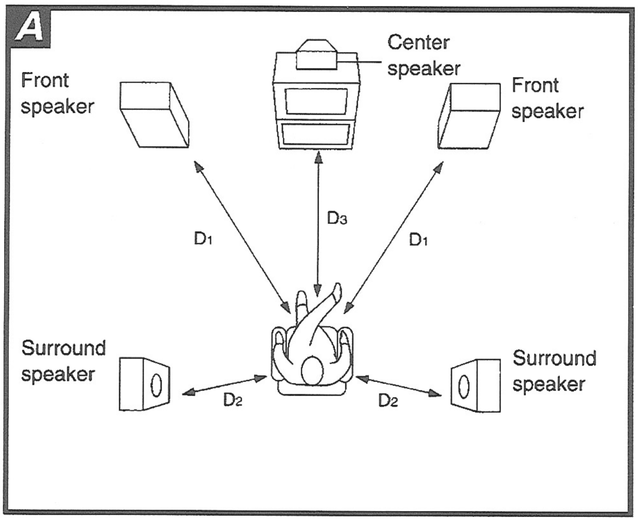
Note

The balance of the surround speakers cannot be adjusted using the BALANCE buttons.

Delay time adjustments


POWER
DIGITAL1
DIGITAL2
DIGITAL3
LINE
SURROUND
DTS
STEREO
DR COMP
BALANCE
L
R
TEST
LEVEL
–
+
DELAY
–
+
MUTING
DIMMER
–
VOLUME
+
1
2
3


1
SURROUND
SURROUND
2
DELAY
–
+
C
5 ms
S
15 ms
3
DELAY
–
+


A
Front speaker
Center speaker
Front speaker
D1
D3
D1
Surround speaker
D2
D2
Surround speaker

By adjusting the delay time, the difference in the distance from the viewing and listening position to the front speakers and the distance to the center speaker and surround speakers can be offset and made equal. This achieves better sound localization and makes a more life-like reproduction of the sound field possible.

Remote control only

1 Press SURROUND to select the surround mode.

"SURROUND" appears on the display.

2 Press DELAY to select the channel to be adjusted.

Each time the button is subsequently pressed, the channel whose delay time is to be set is selected alternately:
C (Center speaker) ⟷ S (Surround speakers)

For each channel, the delay time is displayed, and the speaker indicator for the corresponding speaker flashes.
The display is restored if a button isn't pressed for 4 or more seconds.

Note

Speakers for which NONE has been set are skipped.

3 Press [–] or [+] to set the delay time.

When the button is pressed, the current delay time is displayed. Each time the button is pressed, the delay time will change. The delay time increments are different depending on the speaker as follows.

Speaker	Available delay time setting (ms)
Center	0, 1, 2, 3, 4, 5
Surround	0, 5, 10, 15

Note

Please note the following if delay time is adjusted while playing back a source:
Adjustment is not possible if the source is DTS format.
While the DD PRO LOGIC indicator is alight, the center channel cannot be adjusted and 15 ms are added to the delay times listed for the surround channel when displayed.

To calculate the delay time A

D_1: Distance from front speaker
D_2: Distance from surround speaker
D_3: Distance from center speaker

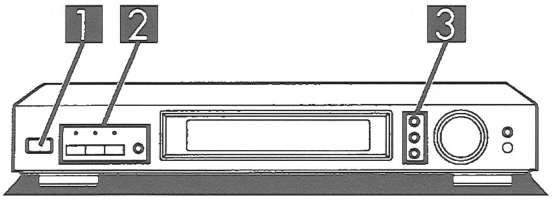
Setting the center channel delay time:

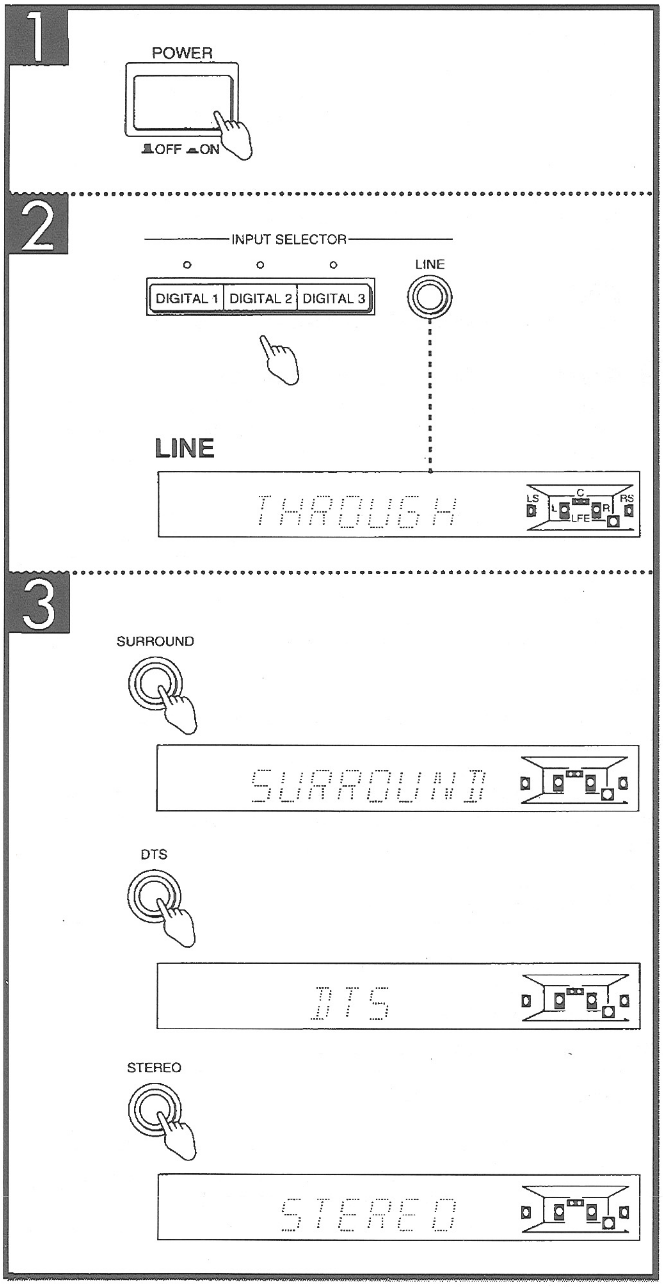
If D_1 is equal to or less than D_3	Set to 0 ms
If D_3 less than D_1	Increase 1 ms for every 30 cm (1 feet) of difference between D_1 and D_3

Setting the surround channel delay time:

If D_1 is equal to or less than D_2	Set to 0 ms
If D_2 is less than D_1	Start at 0 ms and increase by 5 ms for every 1.5 m (5 feet) of difference between D_1 and D_2

Enjoying sound in a variety of reproduction modes





This unit enables sound to be enjoyed in three reproduction modes – SURROUND, DTS and STEREO.

1 **Press POWER.**
Turn on the power to the other AV components as well.

2 **Press one of the input select buttons to select the input source.**
The indicator above the pressed button now lights.

DIGITAL 1: Selects the source connected to the DIGITAL 1 terminal. The unit automatically recognizes whether the source is connected through the optical fiber cable or the coaxial cable.

Note

If both types are connected at the same time, only the coaxial cable is recognized. Disconnect the coaxial cable if the external unit is connected with the optical fiber cable.

DIGITAL 2: Selects the source connected to this terminal.
DIGITAL 3: Selects the source connected to this terminal.
LINE: Selects the source connected to the LINE terminal. If a control amp has been connected to the LINE terminal, select the input source on it as well.

When DIGITAL 1, 2 or 3 has been selected:
The reproduction modes in step 3 can be selected.
When LINE has been selected:
The analog sound signals input through LINE IN terminals are directy output to the left and right front speakers via the connected component. "THROUGH" appears on the display.

Note

Only the POWER button and select buttons function when LINE has been selected.

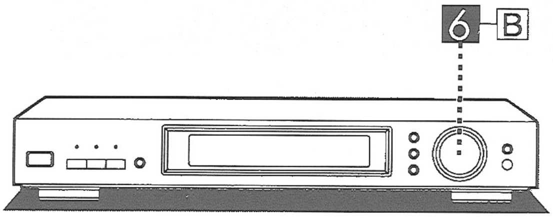
3 **Press SURROUND, DTS or STEREO to select the reproduction mode.**
The selected reproduction mode appears on the display (➡ see the previous page for descriptions of the modes.)

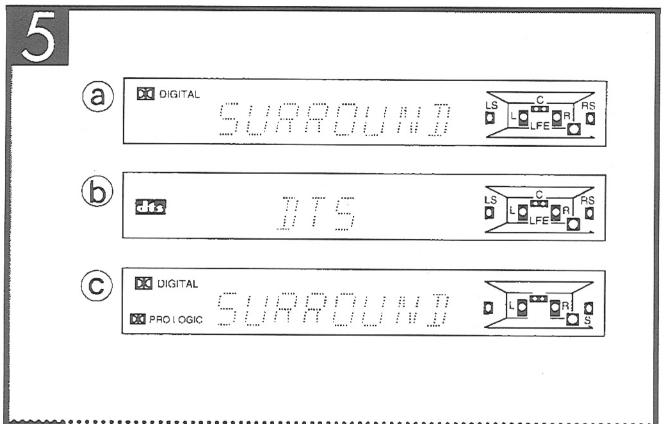
4 (When this unit is connected to a receiver (or amplifier) that 6 channel discrete input terminals:)
Set the receiver (or amplifier) to the 6 channel discrete input mode.

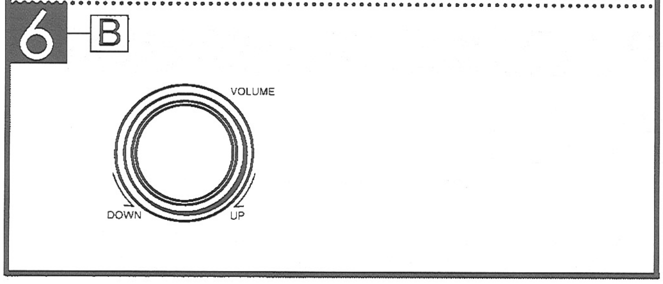
Note

If this unit is connected to three integrated amplifiers, set the input selector on the amplifiers to the connected input terminal such as the "AUX" terminals.
(Refer to the instruction manuals of the components.)

(Continued on next page)







5 Start playing the sound source.

The surround indicators

ⓐ DD DIGITAL: Lights if the source is Dolby Digital Format.
ⓑ dts: Lights if the source is DTS format.
ⓒ DD PRO LOGIC: Lights when Dolby Surround parts of Dolby Digital format software are played back, or when playing audio CDs in the SURROUND mode.

Note

- Only Dolby Digital, DTS or PCM signals ※ can be reproduced.
  The digital input signal of sampling frequencies 96 kHz and other signal formats such as MPEG cannnot be reproduced on this unit.
- When playback is started, the sound may be cut or interrupted before the input source is confirmed as Dolby Digital or DTS.

※ **PCM signal:** This refers to the recording format of signals (44.1 kHz, linear 16 bits) used for audio CDs

6 Adjust the volume.

Set the volume on the receiver (or amplifier) and this unit to the initial level. Any subsequent volume adjustments should be done as follows.

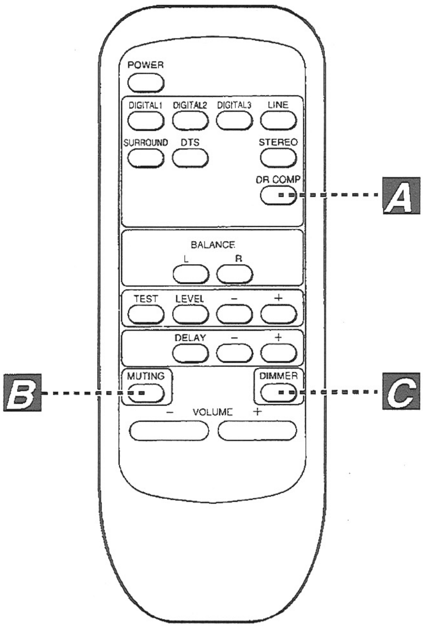
A (When this unit is connected to a receiver (or amplifier) that has 6 channel discrete input terminals:)
Adjust the volume using the volume control on the receiver (or amplifier).
If input to the receiver (or amplifier) is excessive, reduce the volume on this unit slightly.

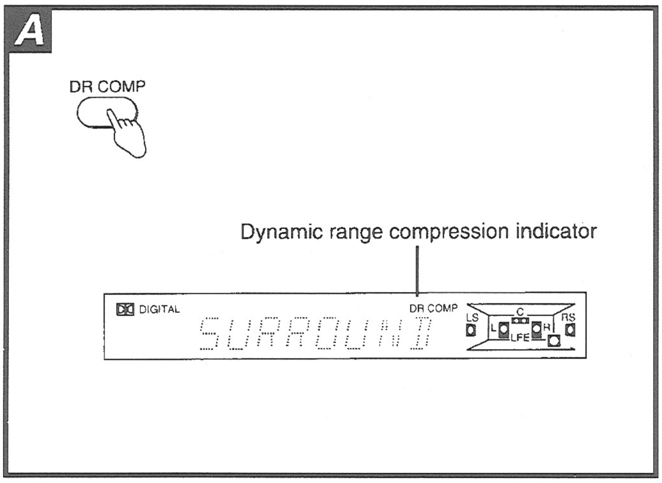
B (When this unit is connected to three standard stereo amplifiers or three integrated amplifiers:)
Adjust the volume using this unit's VOLUME control.
To adjust the volume of the components connected to the stereo control amplifier, use the volume control on the stereo control amplifier.

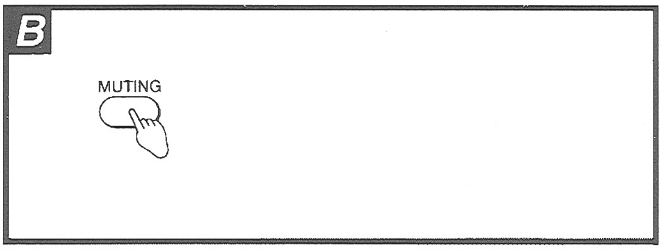
After use

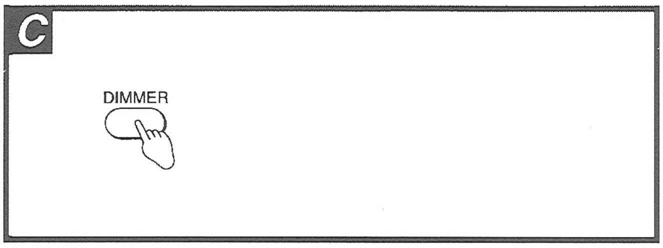
Reduce the volume on the component you are using to control the volume (the receiver, amplifier or this unit) to the minimum level, then turn off the power to this unit and the other components.

Other functions


POWER
DIGITAL1
DIGITAL2
DIGITAL3
LINE
SURROUND
DTS
STEREO
DR COMP
A
BALANCE
L
R
TEST
LEVEL
−
+
DELAY
−
+
MUTING
DIMMER
B
C
−
VOLUME
+


A
DR COMP
Dynamic range compression indicator
DIGITAL
DR COMP
SURROUND
LS
C
RS
L
R
LFE





Setting the midnight mode (dynamic range compression)

"Dynamic range compression" (DR COMP) is a function for compressing the dynamic range (reproduction level range) of audio signals. It is used for viewing movie software late at night or at other times when high volume levels are not desirable.

This function only works with DR COMP compatible Dolby Digital format software.

Remote control only

Press DR COMP. A

The "DR COMP" indicator lights.
When the button is pressed again, the function is released, and the indicator goes off.

For your reference:
When DR COMP is on, scenes that already have a low sound level will be heard as they are. When scenes that are loud occur, the function acts to reduce the peak level.
The sound field will remain intact even if DR COMP is functioning.

Muting the sound temporarily

Remote control only

Press MUTING. B

During muting, the message "MUTING ON NOW" scrolls across the display.
When the button is pressed again, the original volume level is restored. When the unit's power is switched off, muting is canceled.

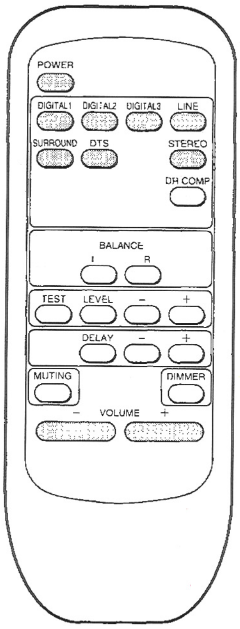
Selecting the display panel brightness

Remote control only

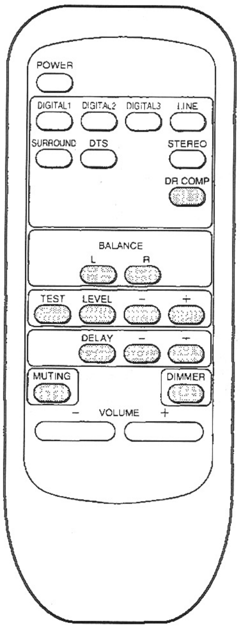
Press DIMMER. C

The display panel is dimmed.
When the button is pressed again, or when the unit's power is switched off, the original brightness is restored.

Remote control quick reference


POWER
DIGITAL1
DIGITAL2
DIGITAL3
LINE
SURROUND
DTS
STEREO
DR COMP
BALANCE
L
R
TEST
LEVEL
–
+
DELAY
–
+
MUTING
DIMMER
–
VOLUME
+

Functions which are also available from the main unit	
To turn the unit ON/OFF	POWER
Selecting the input source	DIGITAL 1 DIGITAL 2 DIGITAL 3 LINE
Selecting the SURROUND reproduction mode	SURROUND
Selecting the DTS reproduction mode	DTS
Selecting the STEREO reproduction mode	STEREO
Adjusting the volume	– VOLUME +


POWER
DIGITAL1
DIGITAL2
DIGITAL3
LINE
SURROUND
DTS
STEREO
DR COMP
BALANCE
L
R
TEST
LEVEL
–
+
DELAY
–
+
MUTING
DIMMER
–
VOLUME
+

Functions which are only available from the remote control	
To turn on the midnight mode	DR COMP
Adjusting the volume balance between the left and right front speakers	BALANCE L R
Outputting the test signal to adjust the output level of each speaker	TEST
Selecting the speaker channel and adjusting its output level	LEVEL → – +
Selecting the speaker channel and adjusting its delay time	DELAY → – +
Muting the sound temporarily	MUTING
Selecting the display panel brightness	DIMMER

Operation Checks

"ATTENTION SERVICER" Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

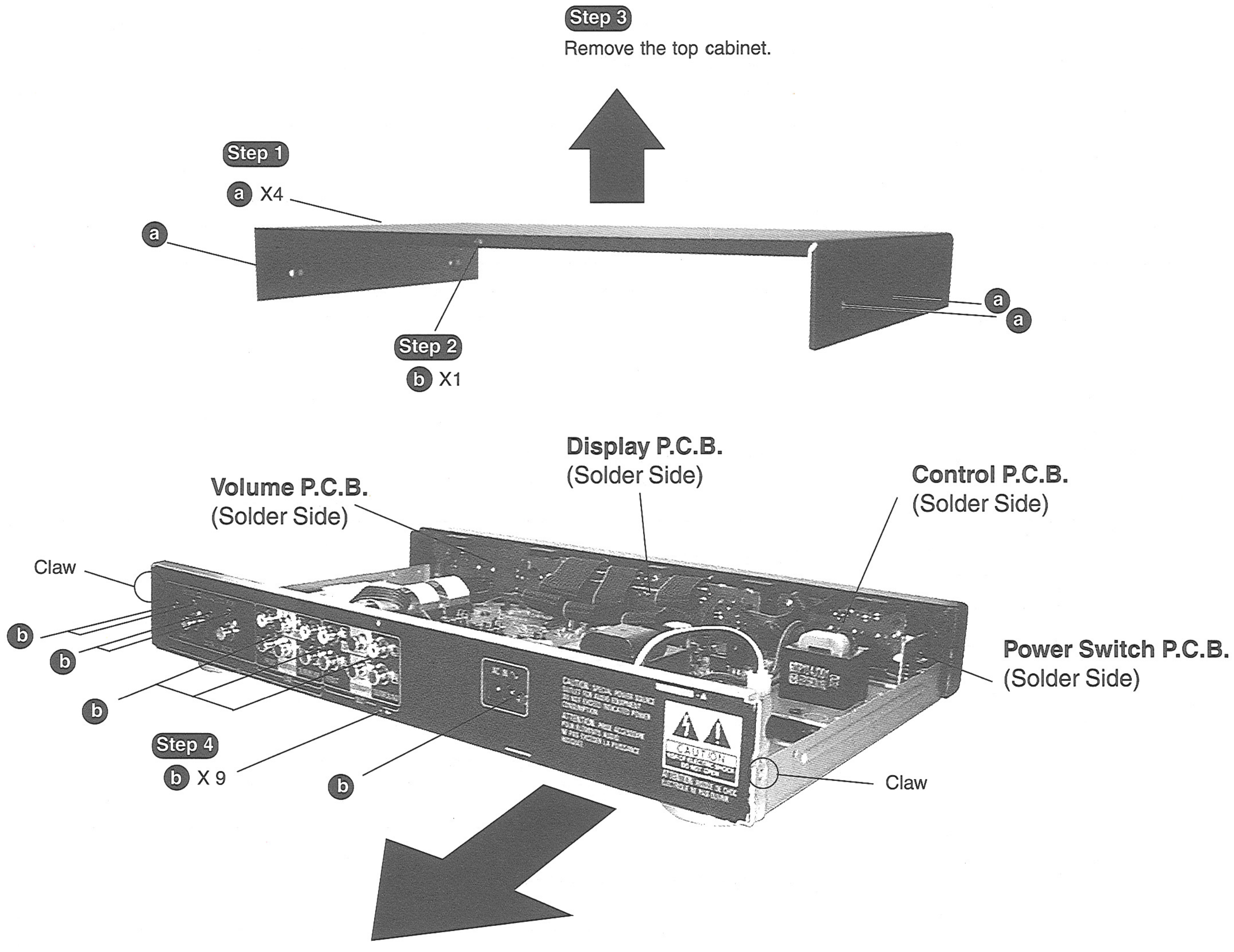
• Contents

page

• Checking Procedure For Each Major P.C.B. .... 16 ~ 17

Checking Procedure For Each Major P.C.B.

1. Checking of the Control, Display, Volume and Power Switch P.C.B.


a
a
a
a
b
b
b
b
b
Claw
Claw
Volume P.C.B.
(Solder Side)
Display P.C.B.
(Solder Side)
Control P.C.B.
(Solder Side)
Power Switch P.C.B.
(Solder Side)

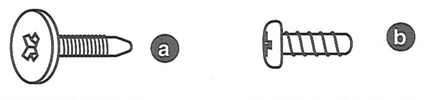
Step 1 ⓐ X4

Step 2 ⓑ X1

Step 3 Remove the top cabinet.

Step 4 ⓑ X 9

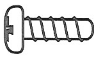
Step 5 Release the two rear claw and pull out the back panel

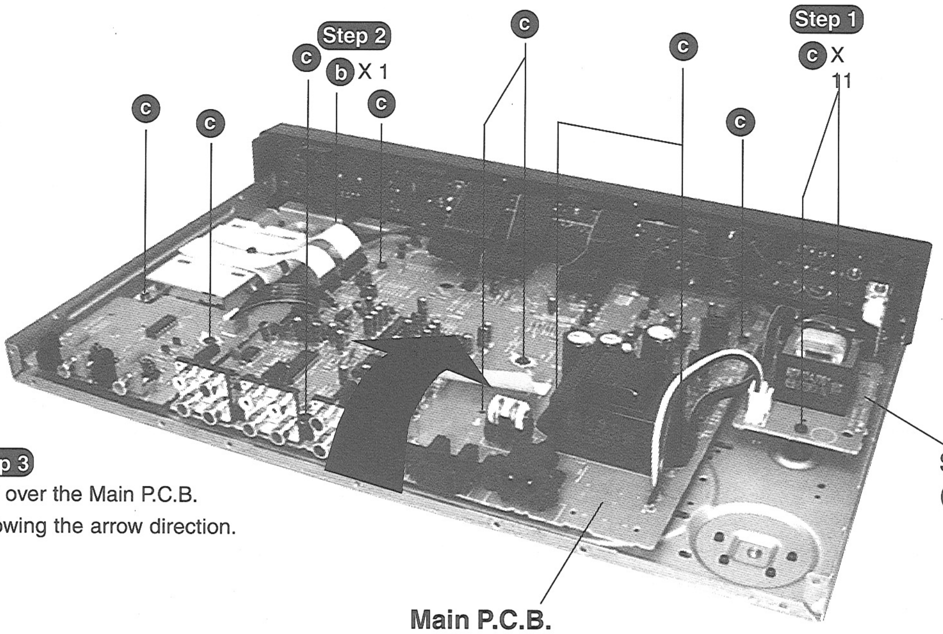


ⓐ [SNE2129-1] (Black)

ⓑ [XTBS3+8JFZ1] (Black)

2. Checking of the AC-3 Module Unit, Display, Sub-Transformer, Digital Input and Main P.C.B.

	ⓑ	[XTBS3+8JFZ1] (Black)
	ⓒ	[XTB3+20JFZ] (Black)



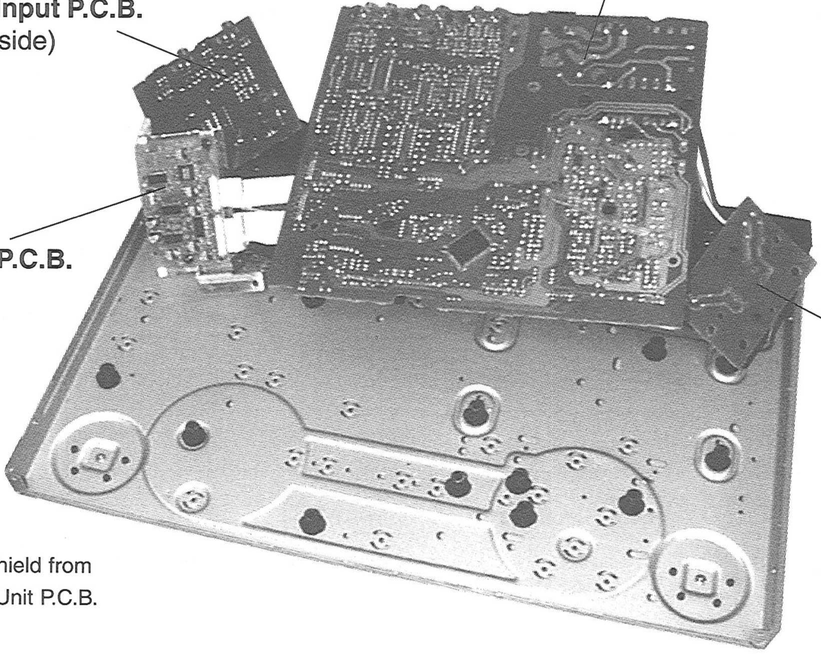
Step 3
Flip over the Main P.C.B.
following the arrow direction.

Sub-Transformer P.C.B.
(Component side)

Main P.C.B.
(Component side)

Main P.C.B.
(Solder side)

Digital Input P.C.B.
(Solder side)



AC-3 Module Unit P.C.B.
(Solder side)

Sub-Transformer P.C.B.
(Solder side)

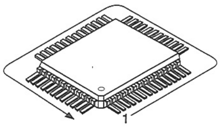
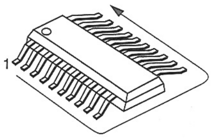
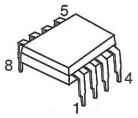
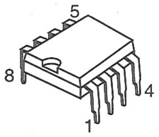
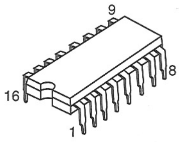
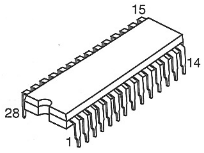
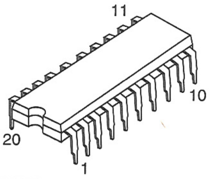
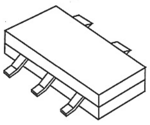
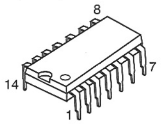
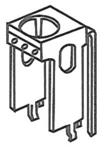
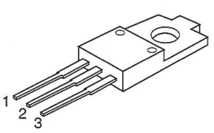
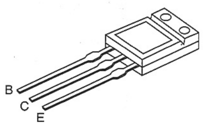
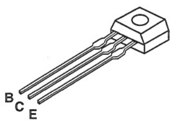
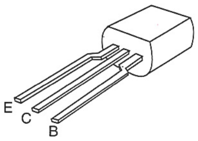
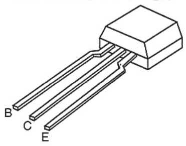
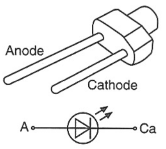
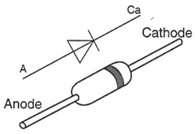
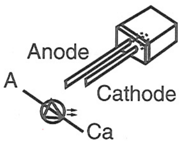
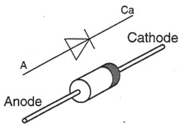
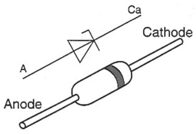
Step 4
Remove the shield from
AC-3 Module Unit P.C.B.

Terminal Functions Of ICs

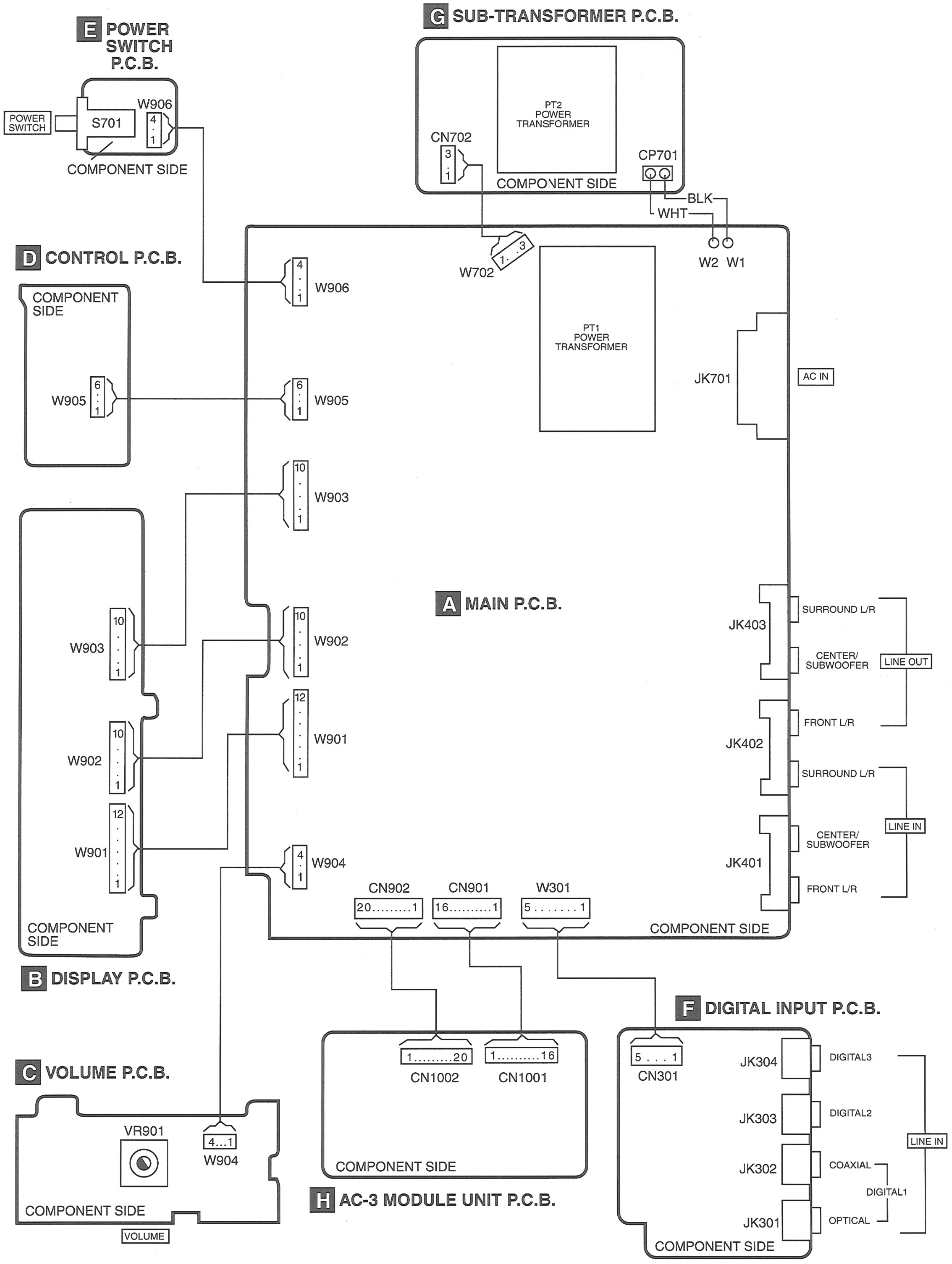
• IC901 (M38B53M4057F) System Microprocessor

Pin No.	Mark	I/O	Function
1	XCS	O	Key Input 1 ~ 2
2	SK	O	Thermal/Over load input 1
3	DI	O	Key Input 4
4	DO	I	Thermal/Over load input 2
5~6	STB1~STB2	O	Stereo signal detect terminal
7~8	RA~RB	I	Wake up timer LED
9	--	I	Control of RDS IC (ST) stereo signal
10	RESET	I	Remote control terminal
11	CK	O	Reset detect terminal
12	DATA	O	Control of RDS IC (CK) clock signal
13	VSS	–	Control of RDS IC (DT) data signal
14	XIN	--	GND terminal
15	XOUT	--	Crystal oscillator terminal (4 MHz)
16	VDD/VCC	--	Crystal oscillator terminal (4 MHz)
17~18	DIGITAL1~2	O	LED driver IC (DT) data signal
19	LINE	O	SFC mode encoder input 1
20	STANDBY	O	SFC mode encoder input 2
21	POWERSW	I	Selector encoder for input 1
22	REMOTE	I	Blackout detection terminal
23	HOLD	I	Selector encoder for input 2
24	POWER	O	VCR2 control input
25~27	A4053A~C	O	6 ch sw control output (ST)
28	VEE	--	Power supply for FL driver
29~30	MUTEA / S	O	Speaker B control output
31~40	DIG10~DIG1	O	Muting control output
41~56	SEG1~SEG16	O	FL digit signal output
57	INIT	I	Diode input initial settings
58	–	I	Volume control output (Down)
59	PDN	O	Volume control output (Up)
60	OVLERR	I	REC Mute control
61	FRQ0	I	Serial data signal
62	FRQ1	I	Power limitter control output
63	AC3	I	Tuner control (CE) chip enable signal
64	AUDIO	I	Selector/Tuner (CK) clock signal
65	CCS	O	Selector/Tuner (DT) data signal
66	CCLK	O	Selector control terminal
67	CDIN	O	MMD control terminal
68	CDOUT	I	Surround control (CK) clock signal
69	SS	O	Surround control (DT) data signal
70	SCK	O	Surround control (CE) chip enable signal
71	MOSI	O	GND for A-D converter
72	MISO	O	Reference voltage for A-D converter
73	AVSS	–	SD signal detect input
74	VREF	–	Encoder of surround mode selector input1
75	MRESET	O	Help LED control output
76	IFCD	I	Encoder of surround mode selector input2
77	TCS	O	Video selector control output A
78	TRST	O	Video selector control output B
79	KEY1	A/D	Key input 1
80	KEY2	A/D	Key input 2

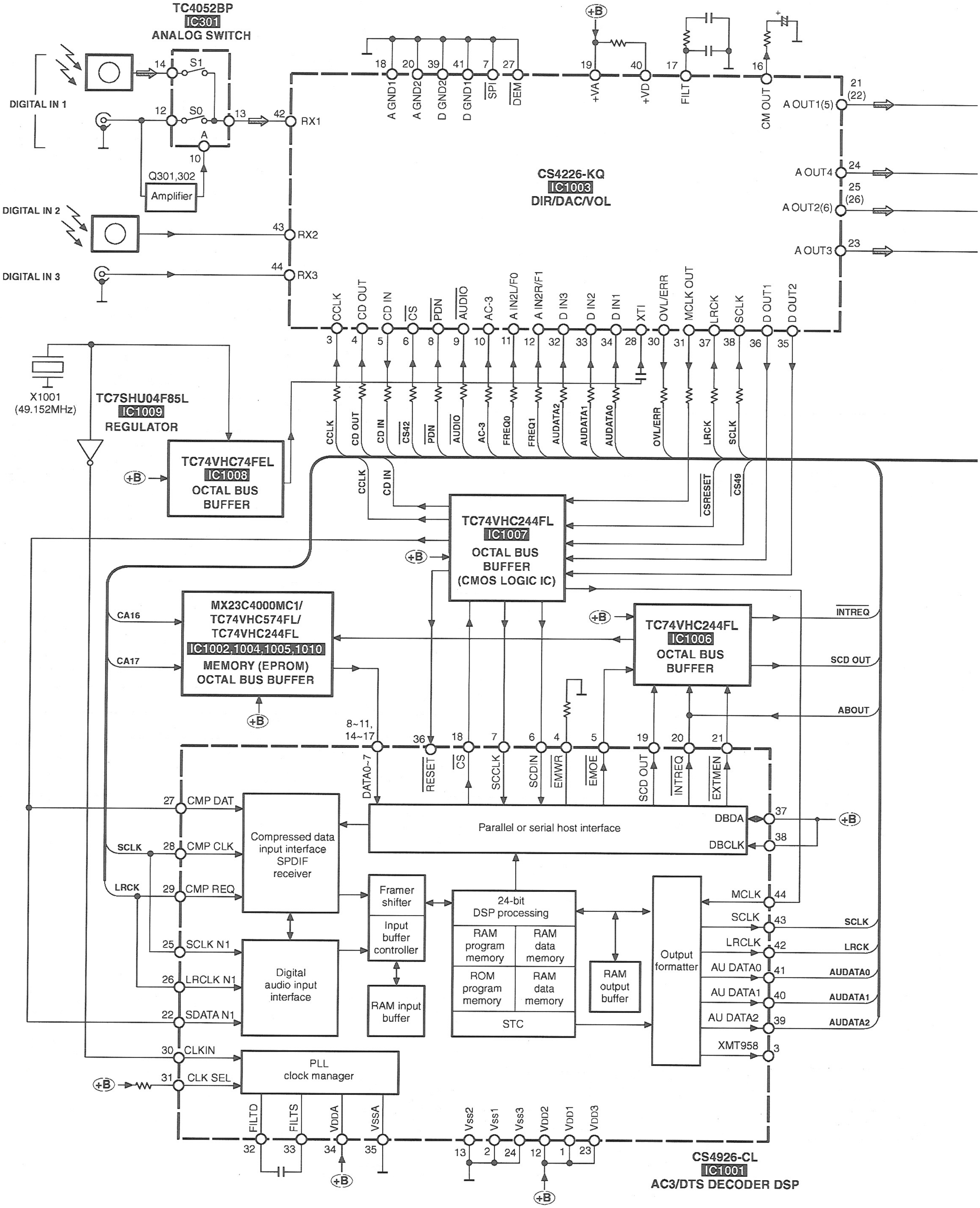
Type Illustration of IC's, Transistors and Diodes

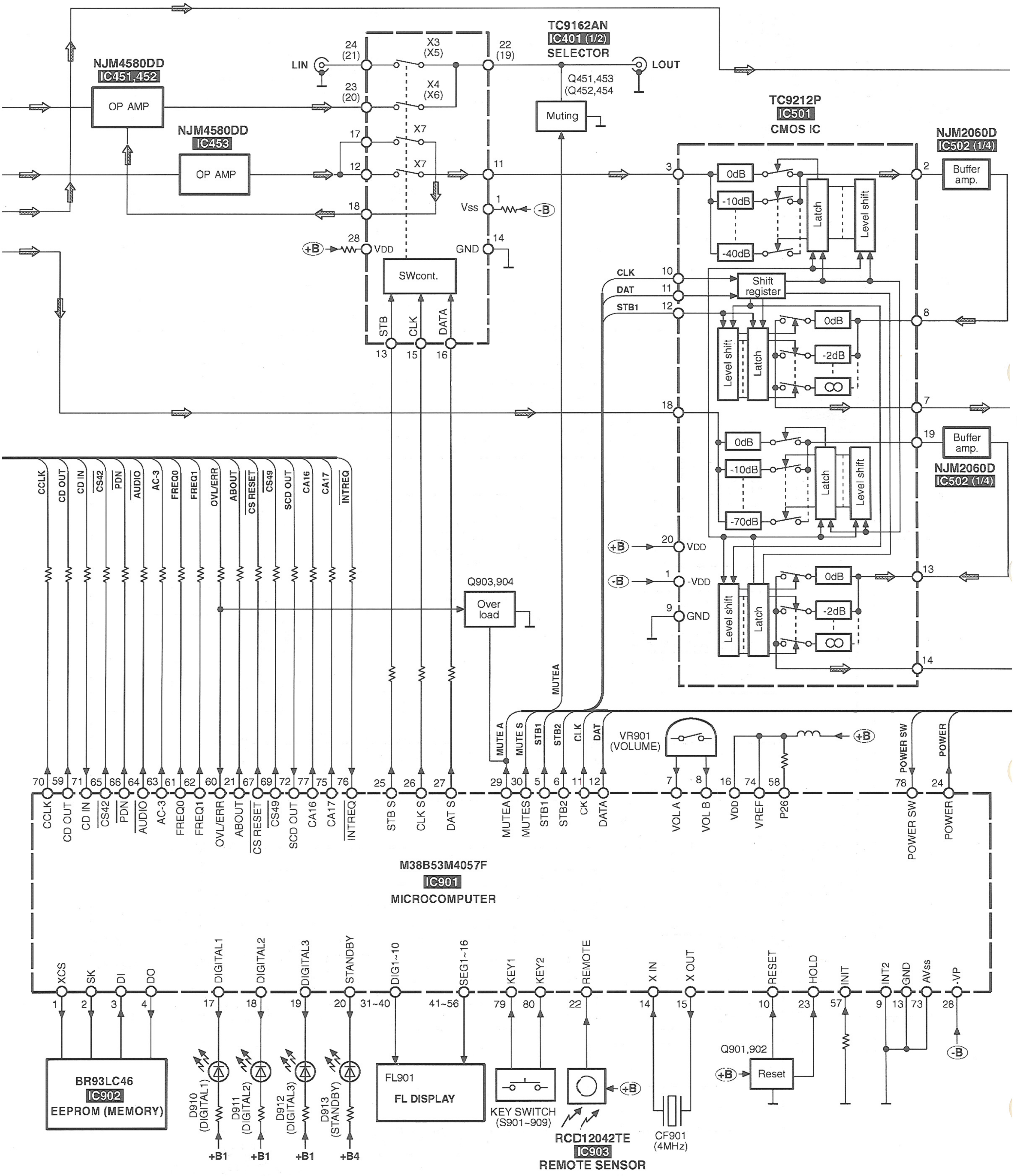
M38B53M4057F CS4926-CL CS4226-KQ  	MX23C4000MC1  	NJM4580DD  	BR93LC46  	TC9212P TC4052BP  	TC9162AN 
TC74VHC574FL TC74VHC244FL  	TC7SHU04F85L 	NJM2060D  	RCD12042TE 	BA033T  	2SD2137PQTA 
2SD1915FTA 2SD1450RSTTA  	2SD592AQSTA 2SA992FEPTA 2SB621AQSTA  	2SA933SSTA 2SC1740SSTA RVTDTA114YST RVTDTC114YST  	SLR325VCT31  Anode Cathode A Ca	RVD1SS133TA  Ca Cathode A Anode	LN846RPH  Anode A Cathode Ca
RL1N4003N02  Ca Cathode A Anode	MTZJ27DTA MTZJ13BTA MTZJ3R9ATA MTZJ4R7BTA MTZJ6R2ATA MTZJ6R2CTA	 Ca Cathode A Anode			

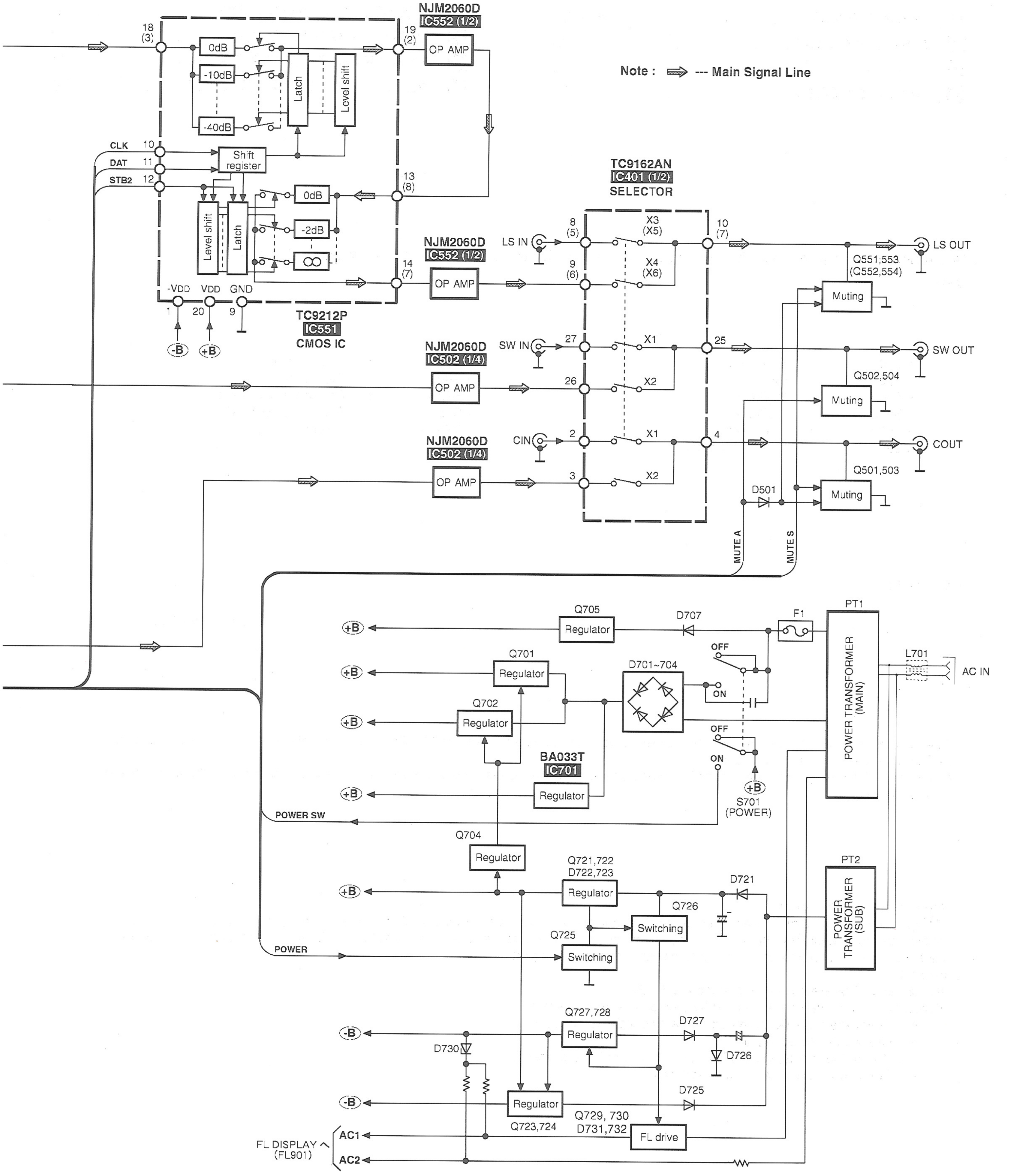
Wiring Connection Diagram


E POWER SWITCH P.C.B.
POWER SWITCH
S701
W906
COMPONENT SIDE
G SUB-TRANSFORMER P.C.B.
PT2 POWER TRANSFORMER
CN702
CP701
COMPONENT SIDE
BLK
WHT
W2
W1
W702
D CONTROL P.C.B.
COMPONENT SIDE
W905
W906
W905
PT1 POWER TRANSFORMER
JK701
AC IN
W903
A MAIN P.C.B.
W903
W902
W902
W901
W901
W904
JK403
SURROUND L/R
CENTER/ SUBWOOFER
LINE OUT
FRONT L/R
JK402
SURROUND L/R
LINE IN
CENTER/ SUBWOOFER
JK401
FRONT L/R
CN902
CN901
W301
COMPONENT SIDE
COMPONENT SIDE
B DISPLAY P.C.B.
F DIGITAL INPUT P.C.B.
C VOLUME P.C.B.
CN1002
CN1001
CN301
JK304
DIGITAL3
JK303
DIGITAL2
LINE IN
JK302
COAXIAL
DIGITAL1
JK301
OPTICAL
VR901
W904
COMPONENT SIDE
VOLUME
COMPONENT SIDE
H AC-3 MODULE UNIT P.C.B.
COMPONENT SIDE

Block Diagram


TC4052BP
IC301
ANALOG SWITCH
DIGITAL IN 1
DIGITAL IN 2
DIGITAL IN 3
S1
S0
A
14
12
13
10
Q301,302
Amplifier
42 RX1
43 RX2
44 RX3
18 A GND1
20 A GND2
39 D GND2
41 D GND1
7 SPI
27 DEM
+B
19 +VA
40 +VD
17 FILT
16 CM OUT
21 (22) A OUT1(5)
24 A OUT4
25 (26) A OUT2(6)
23 A OUT3
CS4226-KQ
IC1003
DIR/DAC/VOL
3 CCLK
4 CD OUT
5 CD IN
6 CS
8 PDN
9 AUDIO
10 AC-3
11 A IN2L/F0
12 A IN2R/F1
32 D IN3
33 D IN2
34 D IN1
28 XTI
30 OVL/ERR
31 MCLK OUT
37 LRCK
38 SCLK
36 D OUT1
35 D OUT2
X1001
(49.152MHz)
TC7SHU04F85L
IC1009
REGULATOR
TC74VHC74FEL
IC1008
OCTAL BUS
BUFFER
CCLK
CD OUT
CD IN
CS42
PDN
AUDIO
AC-3
FREQ0
FREQ1
AUDATA2
AUDATA1
AUDATA0
OVL/ERR
LRCK
SCLK
CSRESET
CS49
TC74VHC244FL
IC1007
OCTAL BUS
BUFFER
(CMOS LOGIC IC)
CA16
CA17
MX23C4000MC1/
TC74VHC574FL/
TC74VHC244FL
IC1002,1004,1005,1010
MEMORY (EPROM)
OCTAL BUS BUFFER
TC74VHC244FL
IC1006
OCTAL BUS
BUFFER
INTREQ
SCD OUT
ABOUT
8~11,
14~17
DATA0-7
36 RESET
18 CS
7 SCCLK
6 SCDIN
4 EMWR
5 EMOE
19 SCD OUT
20 INTREQ
21 EXTMEN
Parallel or serial host interface
DBDA 37
DBCLK 38
27 CMP DAT
28 CMP CLK
29 CMP REQ
SCLK
LRCK
Compressed data
input interface
SPDIF
receiver
Framer
shifter
Input
buffer
controller
RAM input
buffer
24-bit
DSP processing
RAM
program
memory
RAM
data
memory
ROM
program
memory
RAM
data
memory
STC
RAM
output
buffer
Output
formatter
25 SCLK N1
26 LRCLK N1
22 SDATA N1
Digital
audio input
interface
MCLK 44
SCLK 43
LRCLK 42
AU DATA0 41
AU DATA1 40
AU DATA2 39
XMT958 3
SCLK
LRCK
AUDATA0
AUDATA1
AUDATA2
30 CLKIN
31 CLK SEL
PLL
clock manager
32 FILTD
33 FILTS
34 VDDA
35 VSSA
13 Vss2
2 Vss1
24 Vss3
12 VDD2
1 VDD1
23 VDD3
CS4926-CL
IC1001
AC3/DTS DECODER DSP


NJM4580DD
IC451,452
OP AMP
NJM4580DD
IC453
OP AMP
LIN
24 (21)
23 (20)
17
12
18
28
X3 (X5)
X4 (X6)
X7
X7
+B
VDD
SWcont.
STB
CLK
DATA
13
15
16
22 (19)
11
1
Vss
-B
14
GND
TC9162AN
IC401 (1/2)
SELECTOR
LOUT
Q451,453
(Q452,454
Muting
TC9212P
IC501
CMOS IC
0dB
-10dB
-40dB
Latch
Level shift
Shift register
CLK
DAT
STB1
10
11
12
3
2
8
7
18
19
20
1
9
13
14
0dB
-2dB
∞
0dB
-10dB
-70dB
+B
VDD
-B
-VDD
GND
NJM2060D
IC502 (1/4)
Buffer amp.
NJM2060D
IC502 (1/4)
Buffer amp.
CCLK
CD OUT
CD IN
CS42
PDN
AUDIO
AC-3
FREQ0
FREQ1
OVL/ERR
ABOUT
CS RESET
CS49
SCD OUT
CA16
CA17
INTREQ
Q903,904
Over load
MUTEA
MUTE A
MUTE S
STB1
STB2
CLK
DAT
VR901
(VOLUME)
+B
POWER SW
POWER
70 59 71 65 66 64 63 61 62 60 21 67 69 72 77 75 76
25 26 27
29 30 5 6 11 12
7 8 16 74 58
78 24
CCLK
CD OUT
CD IN
CS42
PDN
AUDIO
AC-3
FREQ0
FREQ1
OVL/ERR
ABOUT
CS RESET
CS49
SCD OUT
CA16
CA17
INTREQ
STB S
CLK S
DAT S
MUTEA
MUTES
STB1
STB2
CK
DATA
VOL A
VOL B
VDD
VREF
P26
POWER SW
POWER
M38B53M4057F
IC901
MICROCOMPUTER
XCS
SK
DI
DO
DIGITAL1
DIGITAL2
DIGITAL3
STANDBY
DIG1~10
SEG1~16
KEY1
KEY2
REMOTE
X IN
X OUT
RESET
HOLD
INIT
INT2
GND
AVss
-VP
1 2 3 4
17 18 19 20
31~40
41~56
79 80 22
14 15
10 23 57
9 13 73 28
BR93LC46
IC902
EEPROM (MEMORY)
D910 (DIGITAL1)
D911 (DIGITAL2)
D912 (DIGITAL3)
D913 (STANDBY)
+B1
+B1
+B1
+B4
FL901
FL DISPLAY
KEY SWITCH
(S901~909)
+B
RCD12042TE
IC903
REMOTE SENSOR
CF901
(4MHz)
Q901,902
+B
Reset
-B


NJM2060D
IC552 (1/2)
OP AMP
18 (3)
19 (2)
0dB
-10dB
-40dB
Latch
Level shift
CLK 10
DAT 11
STB2 12
Shift register
13 (8)
0dB
-2dB
∞
Level shift
Latch
14 (7)
-VDD
VDD
GND
1
20
9
-B
+B
TC9212P
IC551
CMOS IC
Note : ⇨ --- Main Signal Line
TC9162AN
IC401 (1/2)
SELECTOR
NJM2060D
IC552 (1/2)
OP AMP
LS IN
8 (5)
9 (6)
X3 (X5)
X4 (X6)
10 (7)
LS OUT
Q551,553 (Q552,554)
Muting
NJM2060D
IC502 (1/4)
OP AMP
SW IN
27
26
X1
X2
25
SW OUT
Q502,504
Muting
NJM2060D
IC502 (1/4)
OP AMP
CIN
2
3
X1
X2
4
COUT
Q501,503
D501
Muting
MUTE A
MUTE S
Q705
Regulator
D707
F1
PT1
+B
Q701
Regulator
D701~704
OFF
ON
L701
AC IN
POWER TRANSFORMER (MAIN)
Q702
Regulator
+B
+B
BA033T
IC701
Regulator
+B
OFF
ON
S701 (POWER)
POWER SW
Q704
Regulator
Q721,722
D722,723
Regulator
D721
Q726
Switching
+B
Q725
Switching
POWER
PT2
POWER TRANSFORMER (SUB)
Q727,728
Regulator
D727
-B
D730
D726
D725
-B
Regulator
Q723,724
Q729, 730
D731,732
FL drive
FL DISPLAY (FL901)
AC1
AC2

Schematic Diagram

Page
A MAIN CIRCUIT .... 26 ~ 27
B DISPLAY CIRCUIT 25
C VOLUME CIRCUIT 30
D CONTROL CIRCUIT 30

Page
E POWER SWITCH CIRCUIT 30
F DIGITAL INPUT CIRCUIT 30
G SUB-TRANSFORMER CIRCUIT 27
H AC-3 MODULE UNIT CIRCUIT .... 28 ~ 29

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

- **S701** : Power switch
- **S901** : Digital 1
- **S902** : Digital 2
- **S903** : Digital 3
- **S904** : Line switch
- **S905** : Surround switch
- **S906** : DTS switch
- **S907** : Stereo switch
- **S908** : Channel select switch
- **S909** : Speaker select switch
- **VR901** : Volume control

- **Signal line**

—— : +B line

- - - - : - B line

⇨ : Main signal line

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
  Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

- **Importance safety notice:**
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

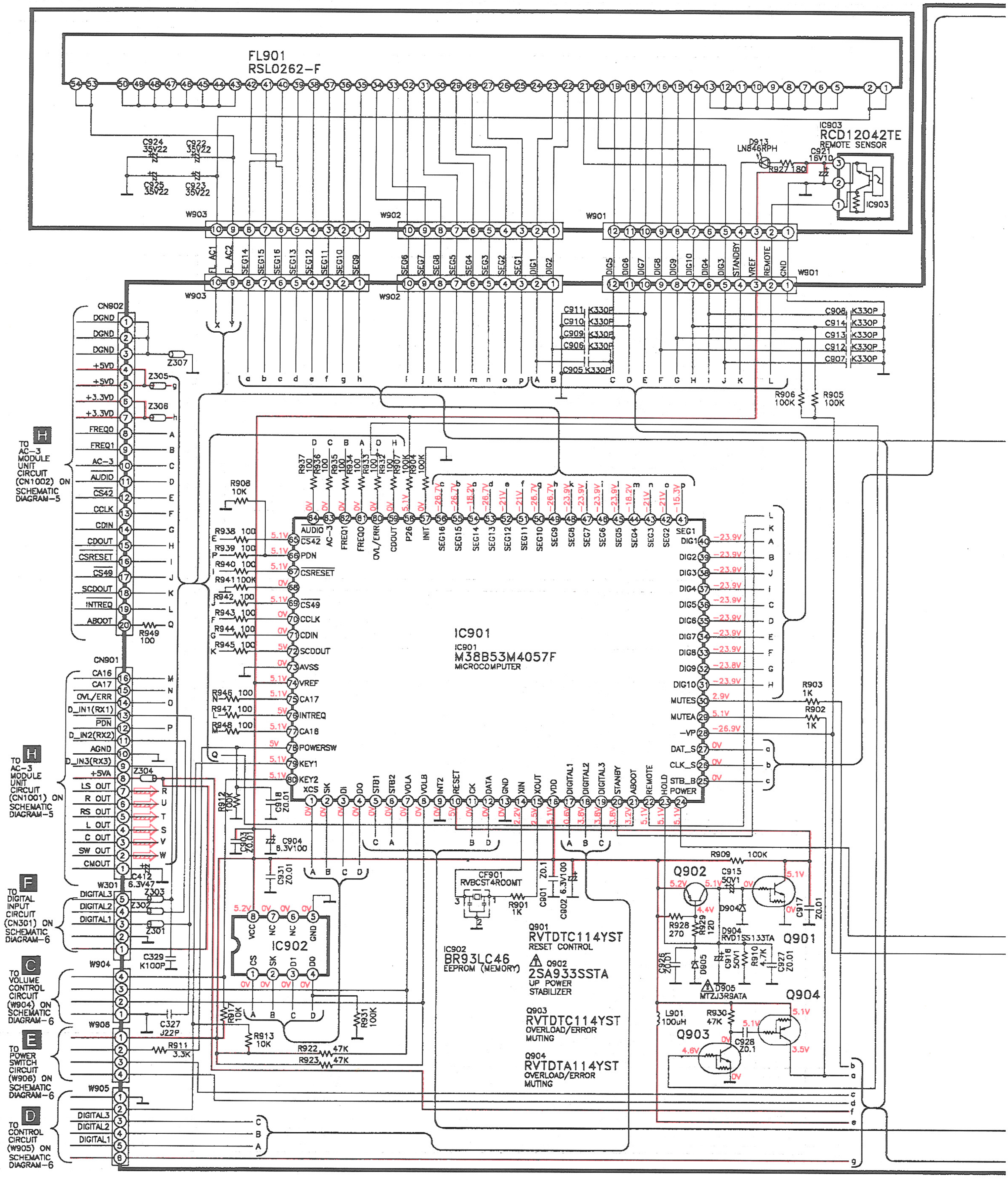
- Cover the parts boxes made of plastics with aluminium foil.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.
- Put a conductive mat on the work table.

SCHEMATIC DIAGRAM - 1

B DISPLAY CIRCUIT

(P.C.Board on page 35)

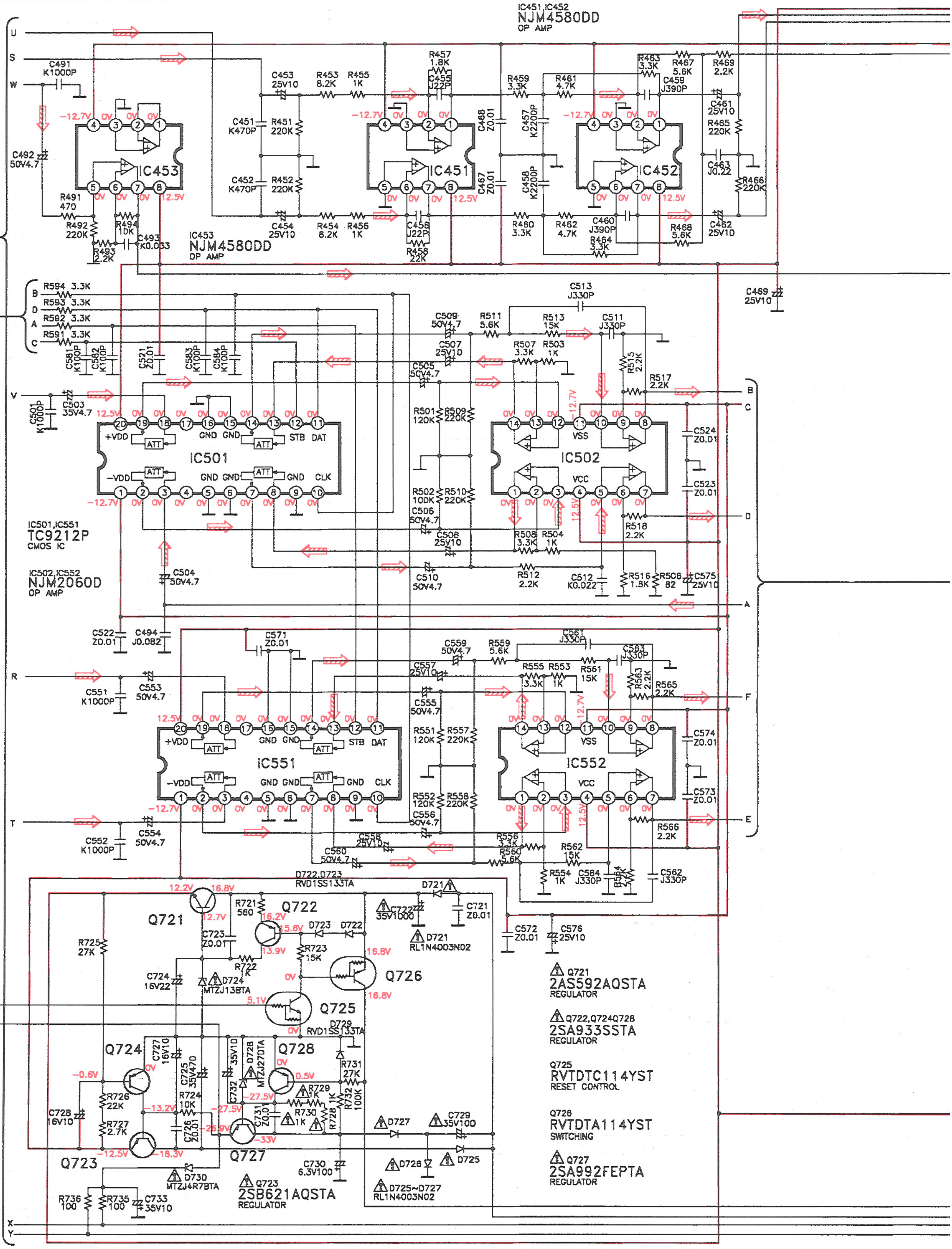
—— : +B Line – – – – : −B Line ⇨ : Main Signal Line


FL901
RSL0262–F
C924 35V22
C922 35V22
C925 35V22
C923 35V22
IC903
RCD12042TE
REMOTE SENSOR
D913
LN846RPH
C921 16V10
R927 180
W903
W902
W901
FL AC1
FL AC2
SEG14
SEG15
SEG16
SEG13
SEG12
SEG11
SEG10
SEG9
SEG6
SEG7
SEG8
SEG5
SEG4
SEG3
SEG2
SEG1
DIG1
DIG2
DIG5
DIG6
DIG7
DIG8
DIG9
DIG10
DIG4
DIG3
STANDBY
VREF
REMOTE
GND
C911 K330P
C910 K330P
C909 K330P
C906 K330P
C905 K330P
C908 K330P
C914 K330P
C913 K330P
C912 K330P
C907 K330P
R906 100K
R905 100K
CN902
DGND
DGND
DGND
+5VD
+5VD
+3.3VD
+3.3VD
FREQ0
FREQ1
AC–3
AUDIO
CS42
CCLK
CDIN
CDOUT
CSRESET
CS49
SCDOUT
INTREQ
ABOOT
Z307
Z305
Z306
R949 100
H
TO AC–3 MODULE UNIT CIRCUIT (CN1002) ON SCHEMATIC DIAGRAM–5
CN901
CA16
CA17
OVL/ERR
D_IN1(RX1)
PDN
D_IN2(RX2)
AGND
D_IN3(RX3)
+5VA
LS OUT
R OUT
RS OUT
L OUT
C OUT
SW OUT
CMOUT
Z304
H
TO AC–3 MODULE UNIT CIRCUIT (CN1001) ON SCHEMATIC DIAGRAM–5
W301
DIGITAL3
DIGITAL2
DIGITAL1
C412 6.3V47
Z303
Z302
Z301
F
TO DIGITAL INPUT CIRCUIT (CN301) ON SCHEMATIC DIAGRAM–6
C329 K100P
W904
C
TO VOLUME CONTROL CIRCUIT (W904) ON SCHEMATIC DIAGRAM–6
W906
C327 J22P
R911 3.3K
E
TO POWER SWITCH CIRCUIT (W906) ON SCHEMATIC DIAGRAM–6
W905
DIGITAL3
DIGITAL2
DIGITAL1
D
TO CONTROL CIRCUIT (W905) ON SCHEMATIC DIAGRAM–6
R908 10K
R937 100
R936 100
R935 100
R934 100
R933 100
R932 100
R907 100K
R904 100K
R938 100
R939 100
R940 100
R941 100K
R942 100
R943 100
R944 100
R945 100
R946 100
R947 100
R948 100
IC901
IC901
M38B53M4057F
MICROCOMPUTER
AUDIO
AC–3
FREQ1
FREQ0
OVL/ERR
CDOUT
P26
INIT
SEG16
SEG15
SEG14
SEG13
SEG12
SEG11
SEG10
SEG9
SEG8
SEG7
SEG6
SEG5
SEG4
SEG3
SEG2
SEG1
CS42
PDN
CSRESET
CS49
CCLK
CDIN
SCDOUT
AVSS
VREF
CA17
INTREQ
CA16
POWERSW
KEY1
KEY2
XCS
SK
DI
DO
STB1
STB2
VOLA
VOLB
INT2
RESET
CK
DATA
GND
XIN
XOUT
VDD
DIGITAL1
DIGITAL2
DIGITAL3
STANBY
ABOOT
REMOTE
HOLD
DIG1
DIG2
DIG3
DIG4
DIG5
DIG6
DIG7
DIG8
DIG9
DIG10
MUTES
MUTEA
–VP
DAT_S
CLK_S
STB_B
POWER
–26.7V
–18.2V
–21V
–23.9V
–15.3V
–23.8V
–26.9V
5.1V
5V
0V
2.9V
2.2V
3.6V
3.2V
R903 1K
R902 1K
R912 100K
C918 Z0.01
C903 Z0.01
C904 6.3V100
C931 Z0.01
IC902
VCC
NC
GND
CS
SK
DI
DO
5.2V
R917 10K
R913 10K
R922 47K
R923 47K
R931 100K
CF901
RVBCST4R00MT
R901 1K
C901 Z0.1
C902 6.3V100
IC902
BR93LC46
EEPROM (MEMORY)
Q901
RVTDTC114YST
RESET CONTROL
Q902
2SA933SSTA
UP POWER STABILIZER
Q903
RVTDTC114YST
OVERLOAD/ERROR MUTING
Q904
RVTDTA114YST
OVERLOAD/ERROR MUTING
R909 100K
Q902
C915 50V1
D904
R928 270
R929 120
C917 Z0.01
D904
RVD1SS133TA
Q901
C926 Z0.01
D905
C916 50V1
R910 4.7K
C927 Z0.01
D905
MTZJ3R9ATA
Q904
L901 100uH
R930 47K
Q903
C928 Z0.1
4.4V
4.6V
3.5V

SCHEMATIC DIAGRAM - 2

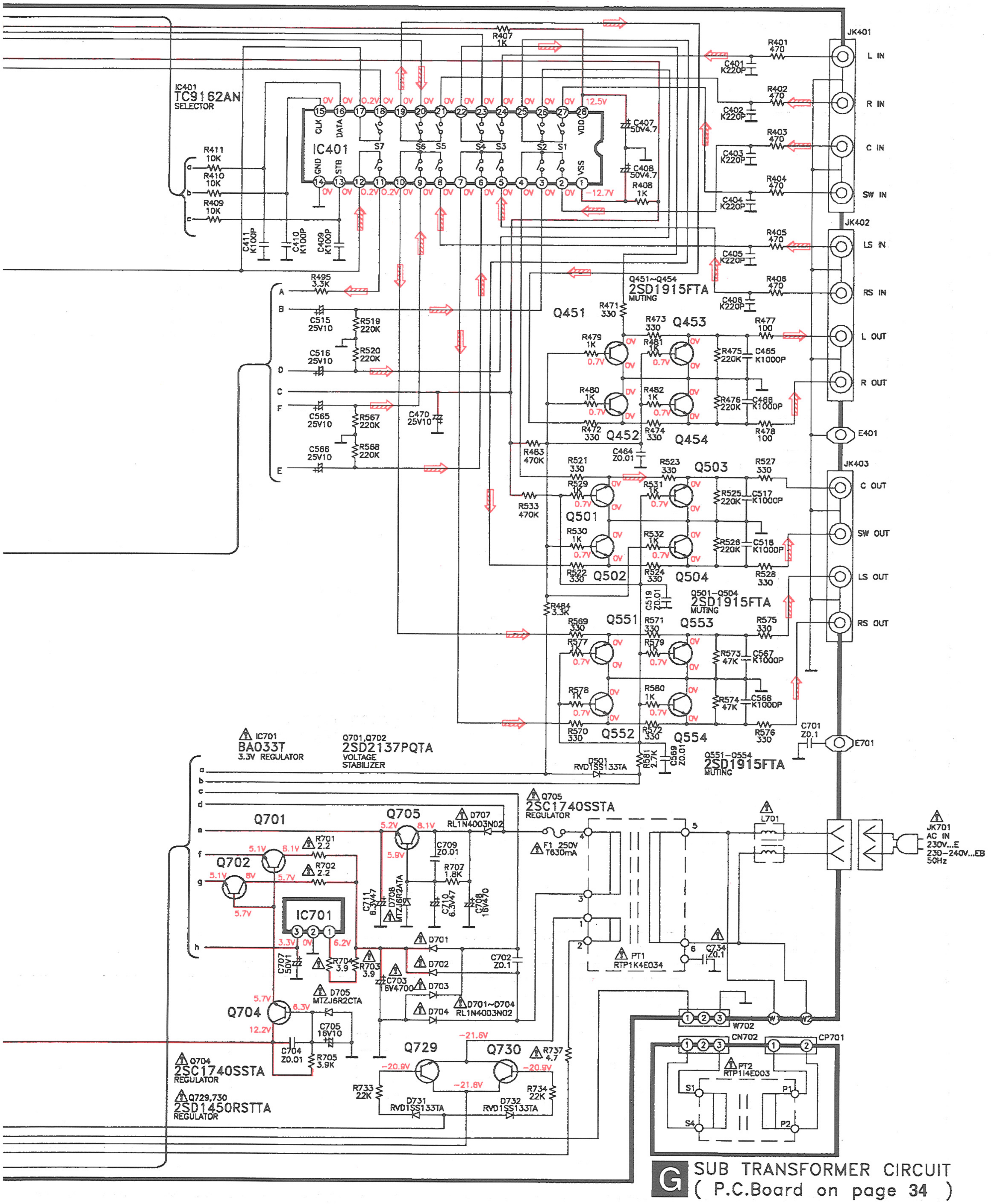
A MAIN CIRCUIT
(P.C.Board on page 32)

——— : +B Line - - - - : −B Line ⇨ : Main Signal Line


U
S
W
V
R
T
X
Y
B
C
D
A
F
E
IC451,IC452
NJM4580DD
OP AMP
IC453
NJM4580DD
OP AMP
IC453
IC451
IC452
C491 K1000P
C492 50V4.7
R491 470
R492 220K
R493 2.2K
R494 10K
C493 K0.033
C453 25V10
R453 8.2K
R455 1K
C451 K470P
R451 220K
C452 K470P
R452 220K
C454 25V10
R454 8.2K
R456 1K
R457 1.8K
C455 J22P
C456 J22P
R458 22K
C468 Z0.01
C467 Z0.01
R459 3.3K
R461 4.7K
C457 K2200P
C458 K2200P
R460 3.3K
R462 4.7K
C460 J390P
R464 3.3K
R463 3.3K
R467 5.6K
C459 J390P
R469 2.2K
C461 25V10
R465 220K
C463 J0.22
R466 220K
R468 5.6K
C462 25V10
C469 25V10
−12.7V
0V
12.5V
R594 3.3K
R593 3.3K
R592 3.3K
R591 3.3K
C581 K100P
C582 K100P
C521 Z0.01
C583 K100P
C584 K100P
C501 K1000P
C503 35V4.7
IC501
+VDD
−VDD
GND
STB
DAT
CLK
ATT
IC501,IC551
TC9212P
CMOS IC
IC502,IC552
NJM2060D
OP AMP
C504 50V4.7
C522 Z0.01
C494 J0.082
C509 50V4.7
C507 25V10
C505 50V4.7
R511 5.6K
R513 15K
C511 J330P
C513 J330P
R507 3.3K
R503 1K
R515 2.2K
R517 2.2K
R501 120K
R509 220K
R502 100K
R510 220K
C506 50V4.7
C508 25V10
C510 50V4.7
IC502
VSS
VCC
C524 Z0.01
C523 Z0.01
R518 2.2K
R508 3.3K
R504 1K
R512 2.2K
C512 K0.022
R516 1.8K
R506 82
C575 25V10
C551 K1000P
C553 50V4.7
C552 K1000P
C554 50V4.7
C571 Z0.01
IC551
C559 50V4.7
R559 5.6K
C561 J330P
C557 25V10
R555 3.3K
R553 1K
R561 15K
C563 J330P
R563 2.2K
R565 2.2K
C555 50V4.7
R551 120K
R557 220K
R552 120K
R558 220K
C556 50V4.7
IC552
C574 Z0.01
C573 Z0.01
R566 2.2K
C558 25V10
C560 50V4.7
R556 3.3K
R560 5.6K
R562 15K
R554 1K
C564 J330P
R564 82
C562 J330P
C572 Z0.01
C576 25V10
D722,D723
RVD1SS133TA
D721
C721 Z0.01
C722 35V1000
D721 RL1N4003N02
Q721
Q722
R721 560
C723 Z0.01
R722 1K
D723
D722
R723 15K
Q726
R725 27K
C724 16V22
D724 MTZJ13BTA
Q725
D729 RVD1SS133TA
Q724
C727 16V10
C725 35V470
C732 35V10
D728 MTZJ27DTA
Q728
R731 27K
R732 100K
R729 1K
R730 1K
R728 1K
R726 22K
R724 10K
C728 16V10
R727 2.7K
C726 Z0.01
C731 Z0.01
Q727
Q723
D730 MTZJ4R7BTA
C730 6.3V100
D727
C729 35V100
D726
D725
D725~D727 RL1N4003N02
R736 100
R735 100
C733 35V10
12.2V
16.8V
12.7V
16.2V
15.6V
13.9V
5.1V
−0.6V
−13.2V
−27.5V
−25.9V
−33V
−12.5V
−18.3V
0.5V
Q723
2SB621AQSTA
REGULATOR
Q721
2AS592AQSTA
REGULATOR
Q722,Q724,Q728
2SA933SSTA
REGULATOR
Q725
RVTDTC114YST
RESET CONTROL
Q726
RVTDTA114YST
SWITCHING
Q727
2SA992FEPTA
REGULATOR

SCHEMATIC DIAGRAM - 3

—— : +B Line ---- : −B Line ⇨ : Main Signal Line


IC401
TC9162AN
SELECTOR
IC401
CLK
DATA
GND
STB
VDD
VSS
S1
S2
S3
S4
S5
S6
S7
R407 1K
R411 10K
R410 10K
R409 10K
C411 K100P
C410 K100P
C409 K100P
C407 50V4.7
C408 50V4.7
R408 1K
12.5V
−12.7V
0.2V
0V
JK401
L IN
R IN
C IN
SW IN
JK402
LS IN
RS IN
L OUT
R OUT
E401
JK403
C OUT
SW OUT
LS OUT
RS OUT
E701
R401 470
R402 470
R403 470
R404 470
R405 470
R406 470
C401 K220P
C402 K220P
C403 K220P
C404 K220P
C405 K220P
C406 K220P
R495 3.3K
C515 25V10
C516 25V10
R519 220K
R520 220K
C565 25V10
C566 25V10
R567 220K
R568 220K
C470 25V10
A
B
C
D
E
F
a
b
c
d
e
f
g
h
Q451~Q454
2SD1915FTA
MUTING
Q451
Q452
Q453
Q454
R471 330
R472 330
R473 330
R474 330
R477 100
R478 100
R479 1K
R480 1K
R481 1K
R482 1K
R475 220K
R476 220K
C465 K1000P
C466 K1000P
R483 470K
C464 Z0.01
0.7V
Q501
Q502
Q503
Q504
R521 330
R522 330
R523 330
R524 330
R527 330
R528 330
R529 1K
R530 1K
R531 1K
R532 1K
R525 220K
R526 220K
C517 K1000P
C518 K1000P
R533 470K
C519 Z0.01
Q501~Q504
2SD1915FTA
MUTING
R484 3.3K
Q551
Q552
Q553
Q554
R569 330
R570 330
R571 330
R572 330
R575 330
R576 330
R577 1K
R578 1K
R579 1K
R580 1K
R573 47K
R574 47K
C567 K1000P
C568 K1000P
C701 Z0.1
R581 2.7K
C569 Z0.01
D501 RVD1SS133TA
Q551~Q554
2SD1915FTA
MUTING
IC701
BA033T
3.3V REGULATOR
Q701,Q702
2SD2137PQTA
VOLTAGE STABILIZER
Q705
2SC1740SSTA
REGULATOR
Q701
Q702
Q705
IC701
D707 RL1N4003N02
F1 250V T630mA
R701 2.2
R702 2.2
C709 Z0.01
R707 1.8K
C711 6.3V47
D708 MTZJ6R2ATA
C710 6.3V47
C708 16V470
5.2V
8.1V
5.1V
5.9V
8V
5.7V
3.3V
6.2V
C707 50V1
R704 3.9
R703 3.9
C703 16V4700
D701
D702
D703
D704
D701~D704 RL1N4003N02
C702 Z0.1
Q704
6.3V
12.2V
D705 MTZJ6R2CTA
C705 16V10
C704 Z0.01
R705 3.9K
Q704
2SC1740SSTA
REGULATOR
Q729,730
2SD1450RSTTA
REGULATOR
Q729
Q730
−21.6V
−20.9V
R737 4.7
R733 22K
R734 22K
D731 RVD1SS133TA
D732 RVD1SS133TA
L701
PT1 RTP1K4E034
C734 Z0.1
JK701
AC IN
230V...E
230-240V...EB
50Hz
W702
W1
W2
CN702
CP701
PT2 RTP1I4E003
S1
S4
P1
P2

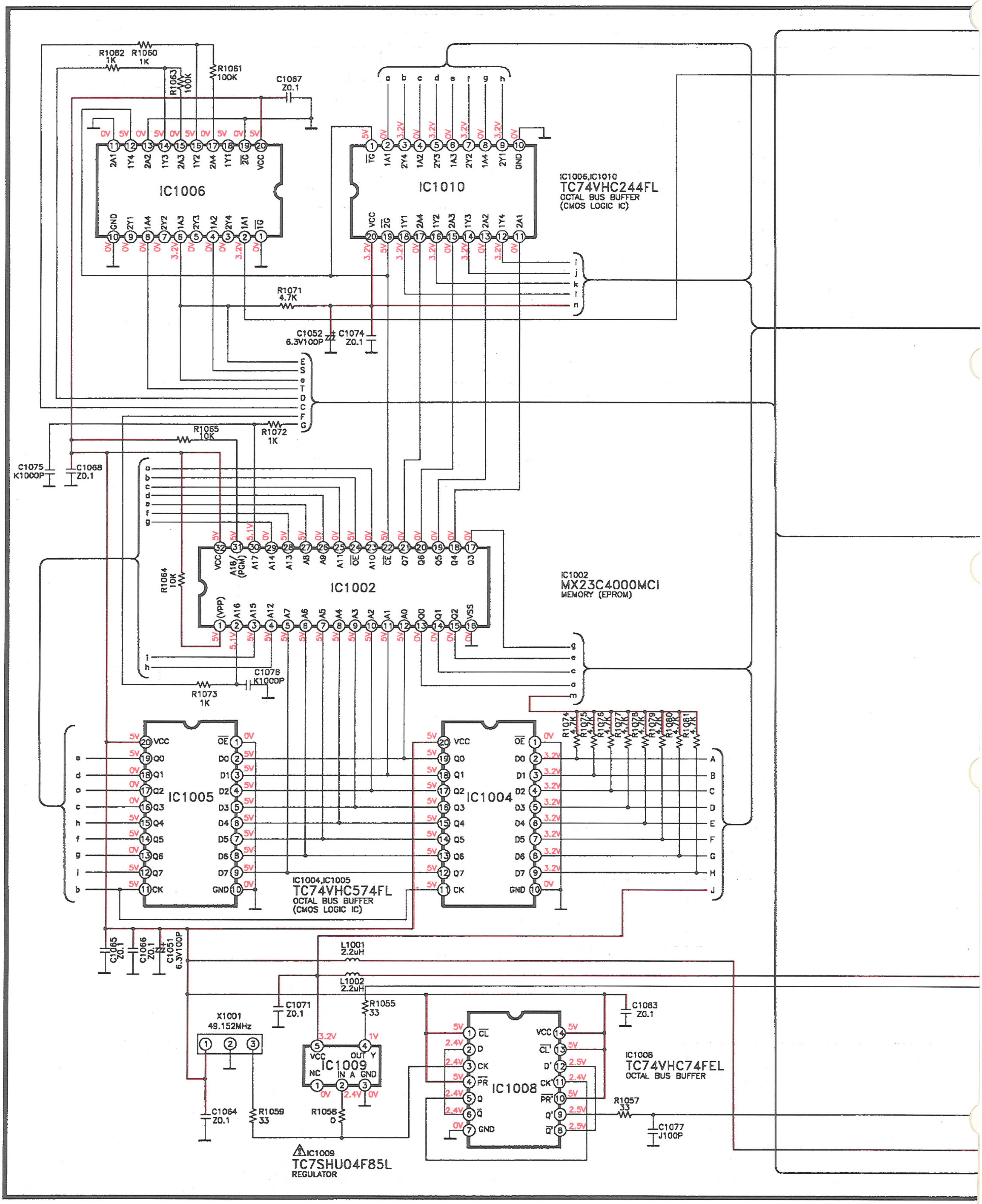
G SUB TRANSFORMER CIRCUIT
(P.C.Board on page 34)

SCHEMATIC DIAGRAM - 4

H AC−3 MODULE UNIT CIRCUIT

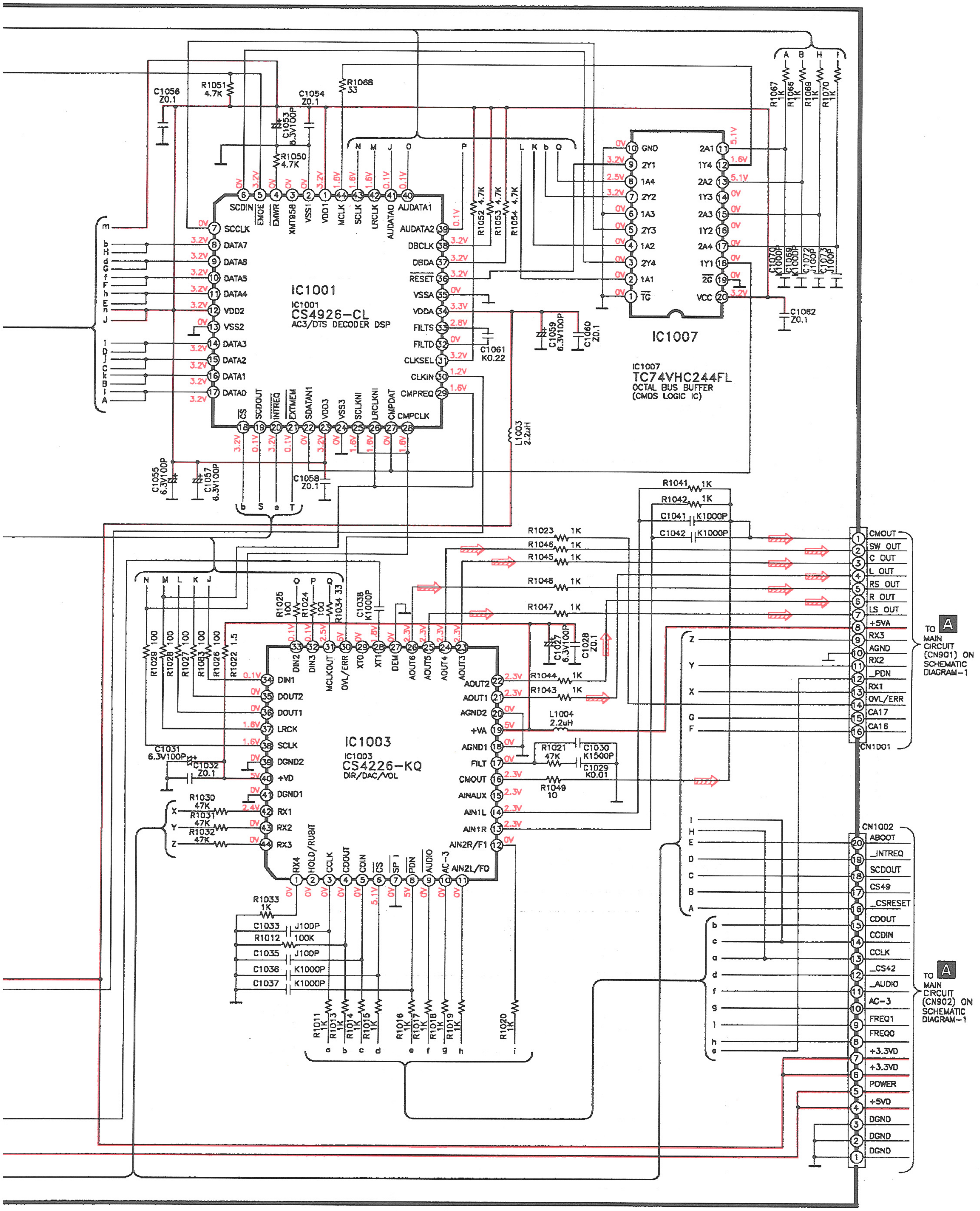
(P.C.Board on page 31)

: +B Line


R1062 1K
R1060 1K
R1061 100K
R1063 100K
C1067 Z0.1
IC1006
IC1010
IC1006,IC1010
TC74VHC244FL
OCTAL BUS BUFFER
(CMOS LOGIC IC)
R1071 4.7K
C1052 6.3V100P
C1074 Z0.1
R1065 10K
R1072 1K
C1075 K1000P
C1068 Z0.1
R1064 10K
IC1002
IC1002
MX23C4000MCI
MEMORY (EPROM)
C1076 K1000P
R1073 1K
R1074 4.7K
R1075 4.7K
R1076 4.7K
R1077 4.7K
R1078 4.7K
R1079 4.7K
R1080 4.7K
R1081 4.7K
IC1005
IC1004
IC1004,IC1005
TC74VHC574FL
OCTAL BUS BUFFER
(CMOS LOGIC IC)
C1065 Z0.1
C1066 Z0.1
C1051 6.3V100P
L1001 2.2uH
L1002 2.2uH
C1071 Z0.1
R1055 33
C1063 Z0.1
X1001 49.152MHz
IC1009
IC1008
IC1008
TC74VHC74FEL
OCTAL BUS BUFFER
C1064 Z0.1
R1059 33
R1058 0
R1057 33
C1077 J100P
IC1009
TC7SHU04F85L
REGULATOR

SCHEMATIC DIAGRAM - 5

— : +B Line ⇨ : Main Signal Line

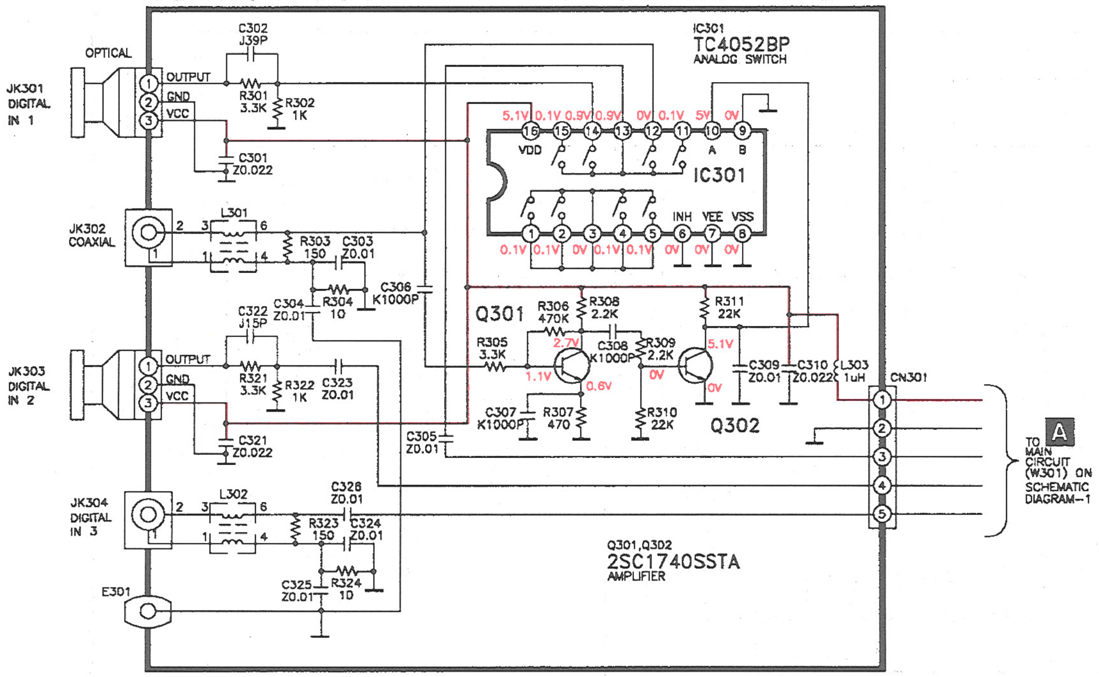

IC1001
CS4926-CL
AC3/DTS DECODER DSP
IC1003
CS4226-KQ
DIR/DAC/VOL
IC1007
TC74VHC244FL
OCTAL BUS BUFFER
(CMOS LOGIC IC)
SCDIN
EMOE
EMWR
XMT958
VSS1
VDD1
MCLK
SCLK
LRCLK
AUDATA0
AUDATA1
AUDATA2
DBCLK
DBDA
RESET
VSSA
VDDA
FILTS
FILTD
CLKSEL
CLKIN
CMPREQ
CMPCLK
CMPDAT
LRCLKNI
SCLKNI
VSS3
VDD3
SDATAN1
EXTMEM
INTREQ
SCDOUT
CS
SCCLK
DATA7
DATA6
DATA5
DATA4
VDD2
VSS2
DATA3
DATA2
DATA1
DATA0
GND
2Y1
1A4
2Y2
1A3
2Y3
1A2
2Y4
1A1
1G
2A1
1Y4
2A2
1Y3
2A3
1Y2
2A4
1Y1
2G
VCC
DIN1
DOUT2
DOUT1
LRCK
SCLK
DGND2
+VD
DGND1
RX1
RX2
RX3
RX4
HOLD/RUBIT
CCLK
CDOUT
CDIN
CS
SP I
PDN
AUDIO
AC-3
AIN2L/F0
AIN2R/F1
AIN1R
AIN1L
AINAUX
CMOUT
FILT
AGND1
+VA
AGND2
AOUT1
AOUT2
AOUT3
AOUT4
AOUT5
AOUT6
DEM
XT1
XT0
OVL/ERR
MCLKOUT
DIN3
DIN2
C1056 Z0.1
R1051 4.7K
C1053 6.3V100P
R1050 4.7K
C1054 Z0.1
R1068 33
R1052 4.7K
R1053 4.7K
R1054 4.7K
R1067 1K
R1066 1K
R1069 1K
R1070 1K
C1070 K1000P
C1069 K1000P
C1072 J100P
C1073 J100P
C1062 Z0.1
C1061 K0.22
C1059 6.3V100P
C1060 Z0.1
L1003 2.2uH
C1055 6.3V100P
C1057 6.3V100P
C1058 Z0.1
R1041 1K
R1042 1K
C1041 K1000P
C1042 K1000P
R1023 1K
R1046 1K
R1045 1K
R1048 1K
R1047 1K
R1025 100
R1024 100
R1034 33
C1038 K1000P
C1027 6.3V100P
C1028 Z0.1
R1029 100
R1028 100
R1027 100
R1083 100
R1026 100
R1022 1.5
C1031 6.3V100P
C1032 Z0.1
R1030 47K
R1031 47K
R1032 47K
R1044 1K
R1043 1K
L1004 2.2uH
R1021 47K
C1030 K1500P
C1029 K0.01
R1049 10
R1033 1K
C1033 J100P
R1012 100K
C1035 J100P
C1036 K1000P
C1037 K1000P
R1011 1K
R1013 1K
R1014 1K
R1015 1K
R1016 1K
R1017 1K
R1018 1K
R1019 1K
R1020 1K
CN1001
CMOUT
SW OUT
C OUT
L OUT
RS OUT
R OUT
LS OUT
+5VA
RX3
AGND
RX2
_PDN
RX1
OVL/ERR
CA17
CA16
TO A MAIN CIRCUIT (CN901) ON SCHEMATIC DIAGRAM-1
CN1002
ABOOT
_INTREQ
SCDOUT
CS49
_CSRESET
CDOUT
CCDIN
CCLK
_CS42
_AUDIO
AC-3
FREQ1
FREQ0
+3.3VD
+3.3VD
POWER
+5VD
DGND
DGND
DGND
TO A MAIN CIRCUIT (CN902) ON SCHEMATIC DIAGRAM-1

SCHEMATIC DIAGRAM - 6

F DIGITAL INPUT CUIRCUIT

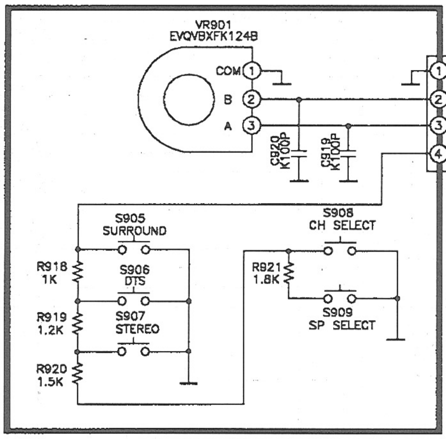
(P.C.Board on page 34)

—— : +B Line


OPTICAL
JK301 DIGITAL IN 1
OUTPUT
GND
VCC
C302 J39P
R301 3.3K
R302 1K
C301 Z0.022
JK302 COAXIAL
L301
R303 150
C303 Z0.01
C306 K1000P
C304 Z0.01
R304 10
C322 J15P
JK303 DIGITAL IN 2
R321 3.3K
R322 1K
C323 Z0.01
C321 Z0.022
C305 Z0.01
JK304 DIGITAL IN 3
L302
C328 Z0.01
R323 150
C324 Z0.01
C325 Z0.01
R324 10
E301
IC301 TC4052BP ANALOG SWITCH
5.1V 0.1V 0.9V 0.9V 0V 0.1V 5V 0V
VDD
A B
IC301
INH VEE VSS
0.1V 0.1V 0V 0.1V 0.1V 0V 0V 0V
Q301
R306 470K
R308 2.2K
R311 22K
R305 3.3K
2.7V
C308 K1000P
R309 2.2K
5.1V
1.1V
0.6V
0V
0V
C309 Z0.01
C310 Z0.022
L303 1uH
C307 K1000P
R307 470
R310 22K
Q302
CN301
TO A MAIN CIRCUIT (W301) ON SCHEMATIC DIAGRAM-1
Q301,Q302 2SC1740SSTA AMPLIFIER

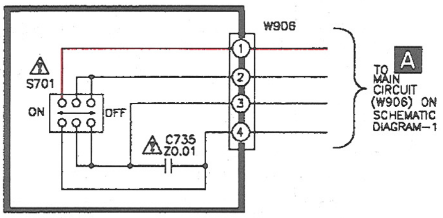
C VOLUME CONTROL CIRCUIT

(P.C.Board on page 35)


VR901 EVQVBXFK124B
COM
B
A
C920 K100P
C919 K100P
W904
TO A MAIN CIRCUIT (W904) ON SCHEMATIC DIAGRAM-1
S905 SURROUND
S906 DTS
S907 STEREO
S908 CH SELECT
S909 SP SELECT
R918 1K
R919 1.2K
R920 1.5K
R921 1.8K

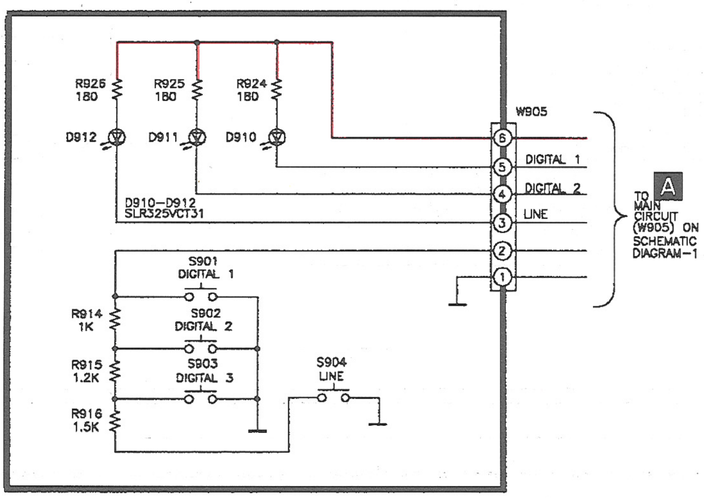
E POWER SWITCH CIRCUIT

(P.C.Board on page 34)


W906
S701
ON
OFF
C735 Z0.01
TO A MAIN CIRCUIT (W906) ON SCHEMATIC DIAGRAM-1

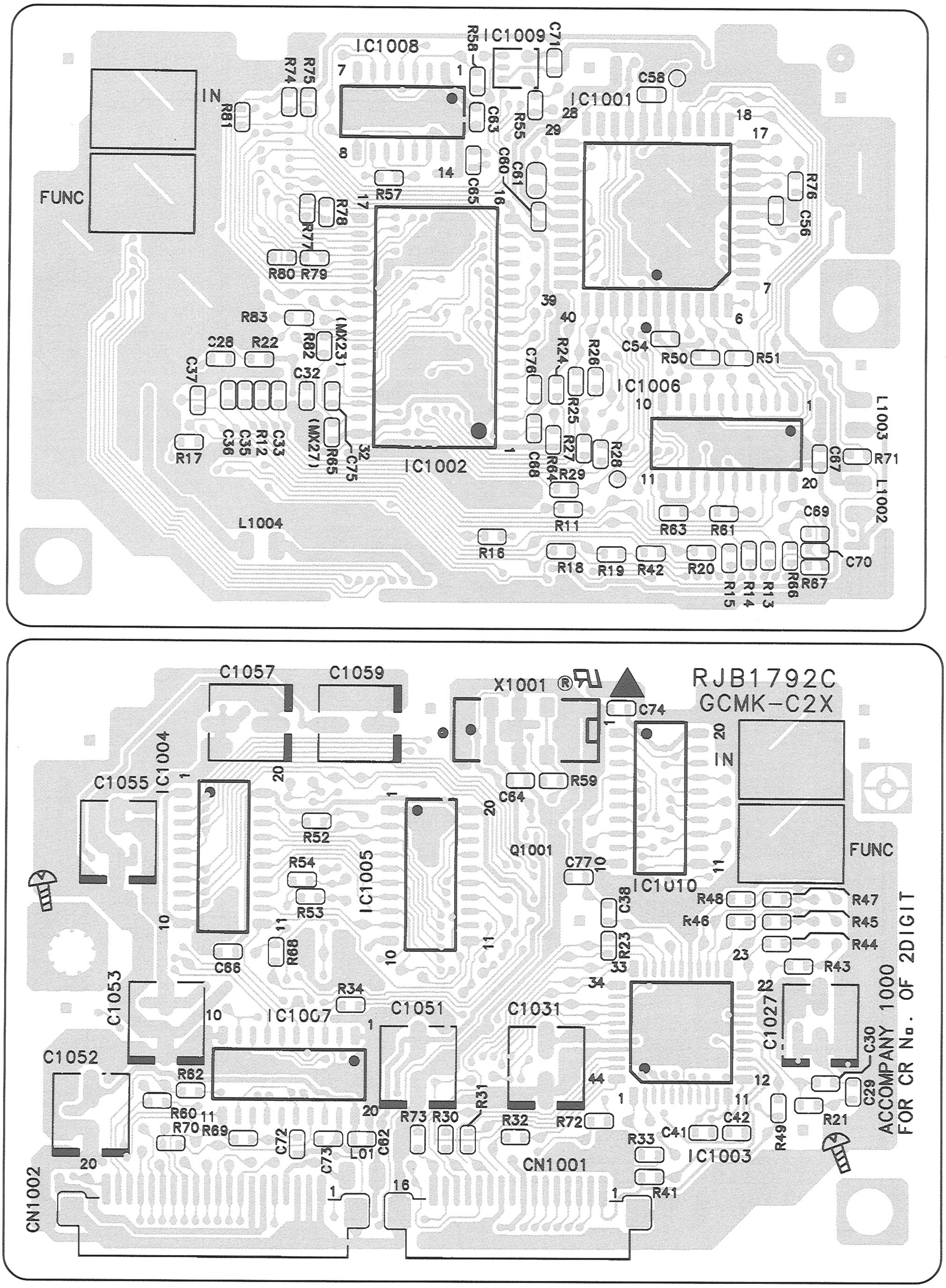
D CONTROL CIRCUIT

(P.C.Board on page 34)

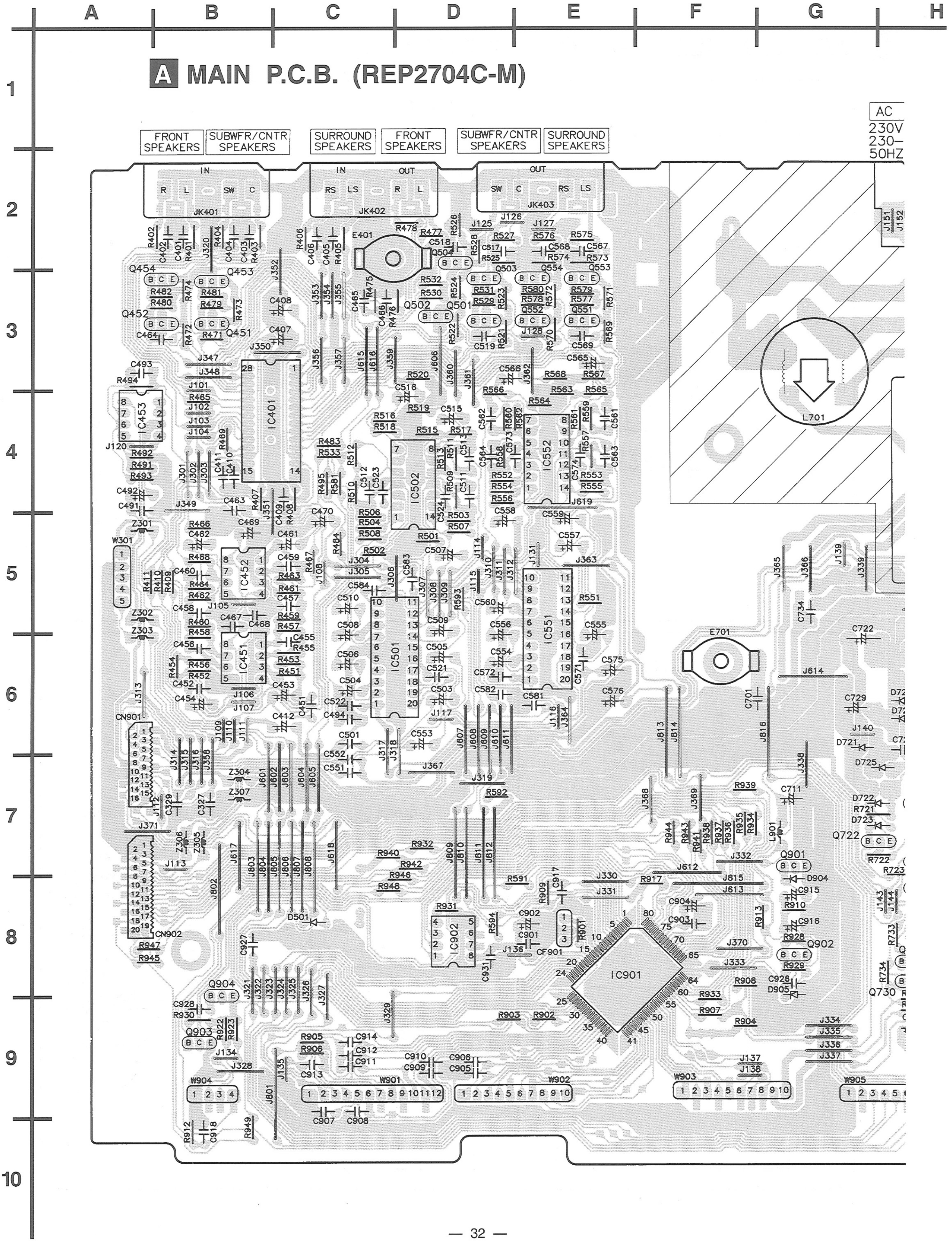

R926 180
R925 180
R924 180
D912
D911
D910
D910-D912 SLR325VCT31
W905
DIGITAL 1
DIGITAL 2
LINE
TO A MAIN CIRCUIT (W905) ON SCHEMATIC DIAGRAM-1
S901 DIGITAL 1
S902 DIGITAL 2
S903 DIGITAL 3
S904 LINE
R914 1K
R915 1.2K
R916 1.5K

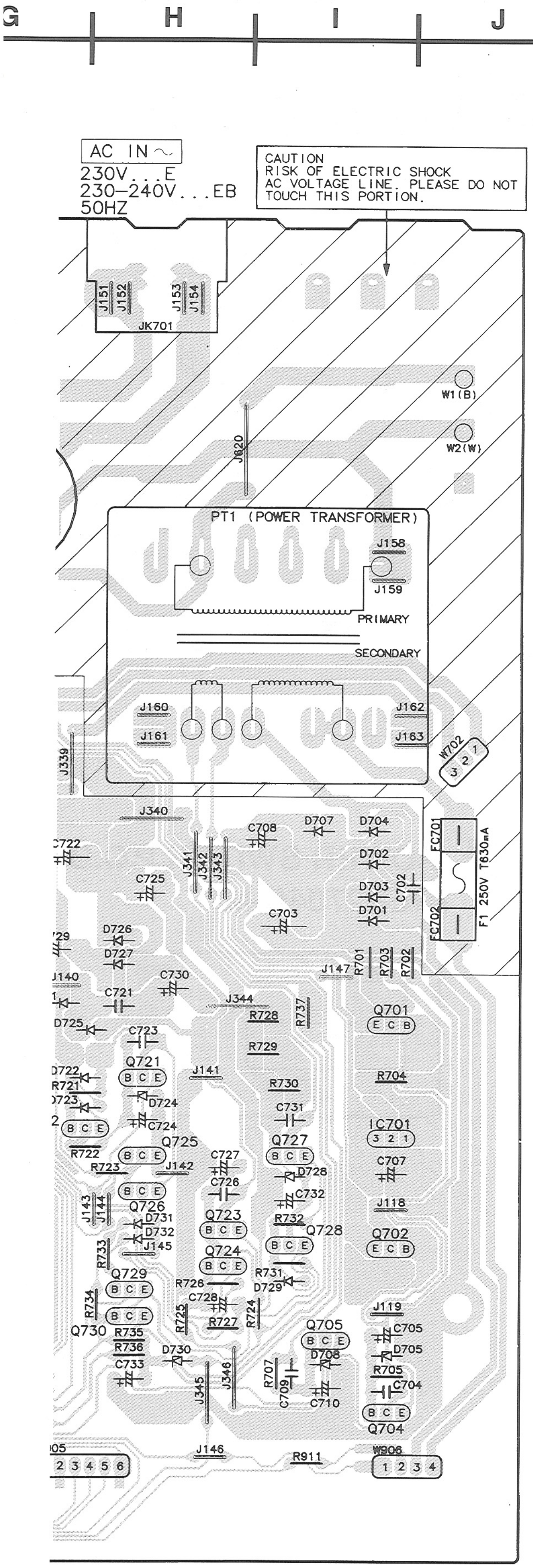
Printed Circuit Board (This printed circuit board diagram may be modified at any time with the developement of new technology.)

H AC-3 MODULE UNIT P.C.B. (REP2703A-T)


IN
FUNC
R81
R74
R75
IC1008
R58
IC1009
C71
C58
C63
R55
IC1001
28
29
18
17
7
8
1
14
C65
C60
C61
16
R57
R78
R77
R80
R79
R76
C56
R83
MX23
R82
C28
R22
C37
C32
C36
C35
R12
C33
R17
MX27
R65
C75
32
IC1002
39
40
C76
R24
R26
C54
R50
R51
6
IC1006
10
11
20
R25
C68
R27
R64
R28
R29
C67
R71
L1003
L1002
L1004
R11
R63
R61
C69
R16
R18
R19
R42
R20
R15
R14
R13
R66
R67
C70
C1057
C1059
X1001
RJB1792C
GCMK-C2X
C74
C1055
IC1004
IN
FUNC
R59
C64
R52
R54
R53
IC1005
Q1001
C77
IC1010
C38
R48
R47
R46
R45
R44
R23
R68
C66
33
34
23
R43
22
C1053
R34
IC1007
C1051
C1031
C1027
C30
C29
C1052
R62
44
12
R60
R70
R69
C72
C73
L01
C62
R73
R30
R31
R32
R72
R33
C41
C42
R49
R21
IC1003
CN1001
CN1002
R41
ACCOMPANY 1000
FOR CR No. OF 2DIGIT

A MAIN P.C.B. (REP2704C-M)

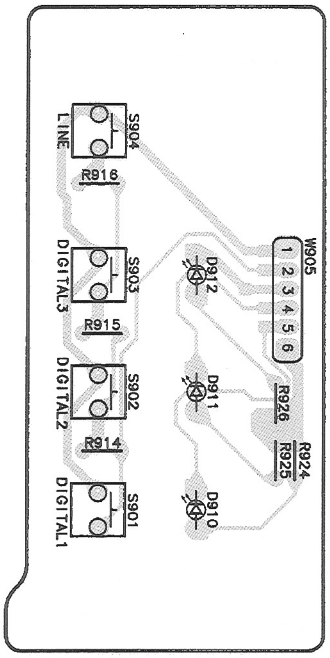

A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
FRONT SPEAKERS
SUBWFR/CNTR SPEAKERS
SURROUND SPEAKERS
FRONT SPEAKERS
SUBWFR/CNTR SPEAKERS
SURROUND SPEAKERS
AC
230V
230–
50HZ
IN
OUT
JK401
JK402
JK403
IC401
IC453
IC452
IC451
IC502
IC552
IC501
IC551
IC902
IC901
E401
E701
L701
CN901
CN902
W301
W901
W902
W903
W904
W905
Q451
Q452
Q453
Q454
Q501
Q502
Q503
Q504
Q551
Q552
Q553
Q554
Q722
Q730
Q901
Q902
Q903
Q904
CF901
D501
D721
D722
D723
D725
D904
D905
L901


G
H
I
J
K
L
M
N
AC IN ~
230V...E
230–240V...EB
50HZ
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS PORTION.
J151
J152
J153
J154
JK701
W1(B)
W2(W)
J620
PT1 (POWER TRANSFORMER)
J158
J159
PRIMARY
SECONDARY
J160
J161
J162
J163
W702
J339
J340
C722
J341
J342
J343
C708
D707
D704
D702
D703
D701
C702
FC701
FC702
F1 250V T630mA
C725
C703
D726
D727
C730
C721
J140
D725
J147
R701
R703
R702
J344
R728
R737
Q701
E C B
C723
R729
Q721
B C E
D722
R721
D723
D724
C724
J141
R730
R704
C731
IC701
3 2 1
Q725
Q727
C707
R722
R723
J142
C727
C726
D728
C732
J118
J143
J144
Q726
D731
D732
J145
Q723
R732
Q728
Q702
R733
Q724
Q729
R726
R731
D729
R734
Q730
C728
R725
R727
R724
J119
C705
R735
R736
D730
Q705
D708
D705
C733
R707
R705
C709
C710
C704
J345
J346
Q704
J146
R911
W906
1 2 3 4
2 3 4 5 6

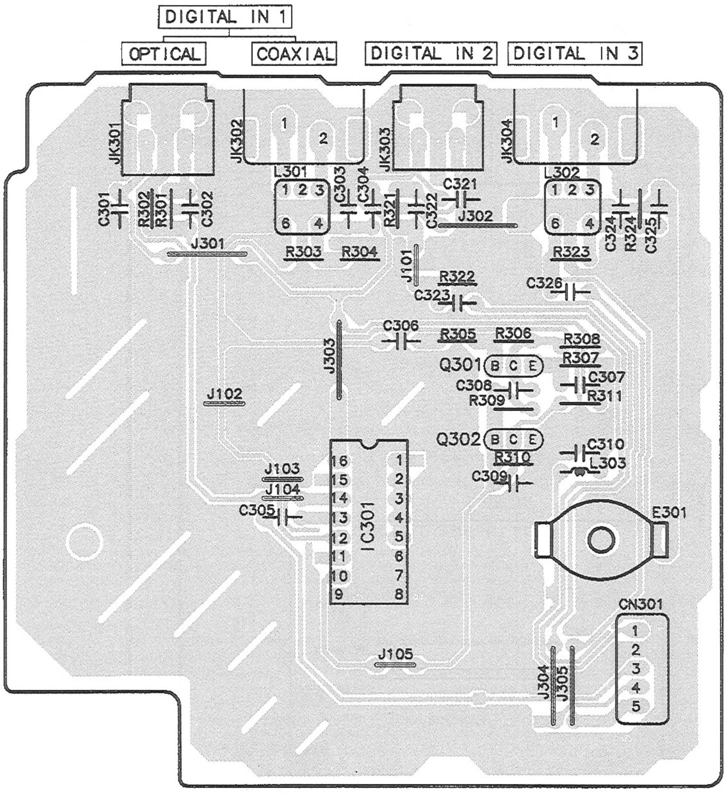
Parts Location Table

Ref No.	Loc. No.
CF901	E8
CN901	A6
CN902	B8
D701	I6
D702	I6
D703	I6
D704	I5
D705	I9
D707	I5
D721	G6
D722	G7
D723	G7
D724	G7
D725	G7
D726	H6
D727	H6
D728	I8
D729	I8
D730	H9
D731	H8
D732	H8
D904	G8
D905	G9
E401	C2
E701	F6
FC701	J6
FC702	J6
IC401	B4
IC451	B6
IC452	B5
IC453	A4
IC501	C6
IC502	D4
IC551	E6
IC552	E4
IC701	I7
IC901	E8
IC902	D8
JK401	B2
JK402	C2
JK403	E2
JK701	H2
L701	G3
L901	G7
Q451	B3
Q452	B3
Q453	B2
Q454	B2
Q501	D3
Q502	D3
Q503	D2
Q504	D2
Q551	E3
Q552	E3
Q553	E2
Q554	E2
Q701	I7
Q702	I8
Q704	I9
Q705	I9
Q721	H7
Q722	G7
Q723	H8
Q724	H8
Q725	H7
Q726	H8
Q727	I7
Q728	I8
Q729	H8
Q730	G9
Q901	G7
Q902	G8
Q903	B9
Q904	B8
W1	J3
W2	J3
W301	A5
W702	J5
W901	C9
W902	E9
W903	F9
W904	B9
W905	G9
W906	I9
Z301	A5
Z302	A5
Z303	A5
Z304	B7
Z305	B7
Z306	B7
Z307	B7

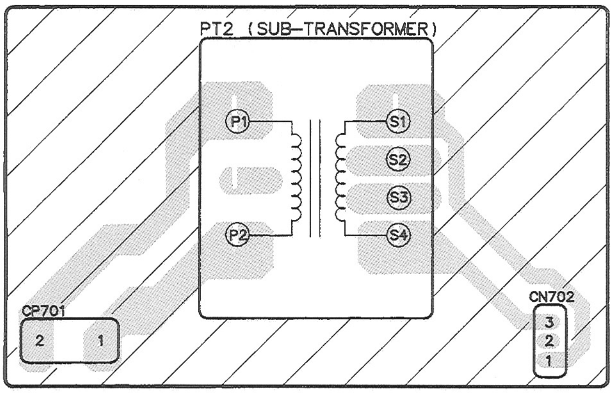
D CONTROL P.C.B. (REP2704C-M)


LINE
S904
R916
DIGITAL3
S903
R915
DIGITAL2
S902
R914
DIGITAL1
S901
W905
1 2 3 4 5 6
D912
D911
D910
R926
R924
R925

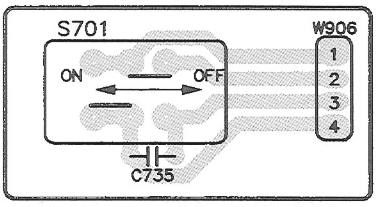
F DIGITAL INPUT P.C.B. (REP2705C-T)


DIGITAL IN 1
OPTICAL
COAXIAL
DIGITAL IN 2
DIGITAL IN 3
JK301
JK302
JK303
JK304
L301
L302
C301
R302
R301
C302
C303
C304
R321
C322
C321
J302
C324
R324
C325
J301
R303
R304
R323
J101
R322
C323
C326
C306
R305
R306
R308
R307
Q301
B C E
C308
R309
C307
R311
J303
J102
Q302
R310
C310
L303
C309
J103
J104
C305
IC301
E301
CN301
J105
J304
J305

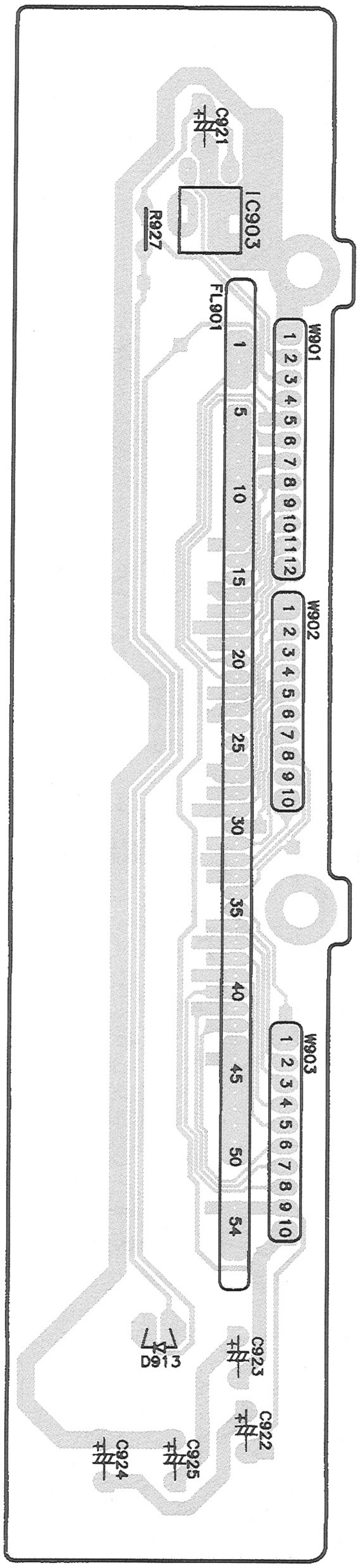
G SUB-TRANSFORMER P.C.B. (REP2705C-T)


PT2 (SUB-TRANSFORMER)
P1
P2
S1
S2
S3
S4
CP701
2
1
CN702
3
2
1

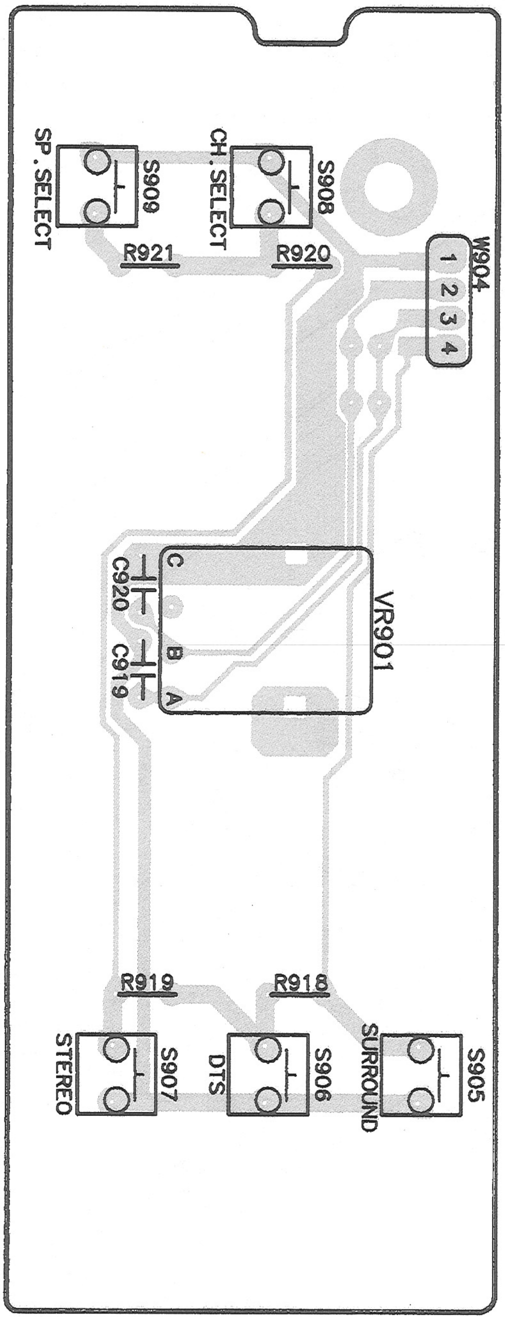
E POWER SWITCH P.C.B. (REP2704C-M)


S701
W906
ON
OFF
1
2
3
4
C735

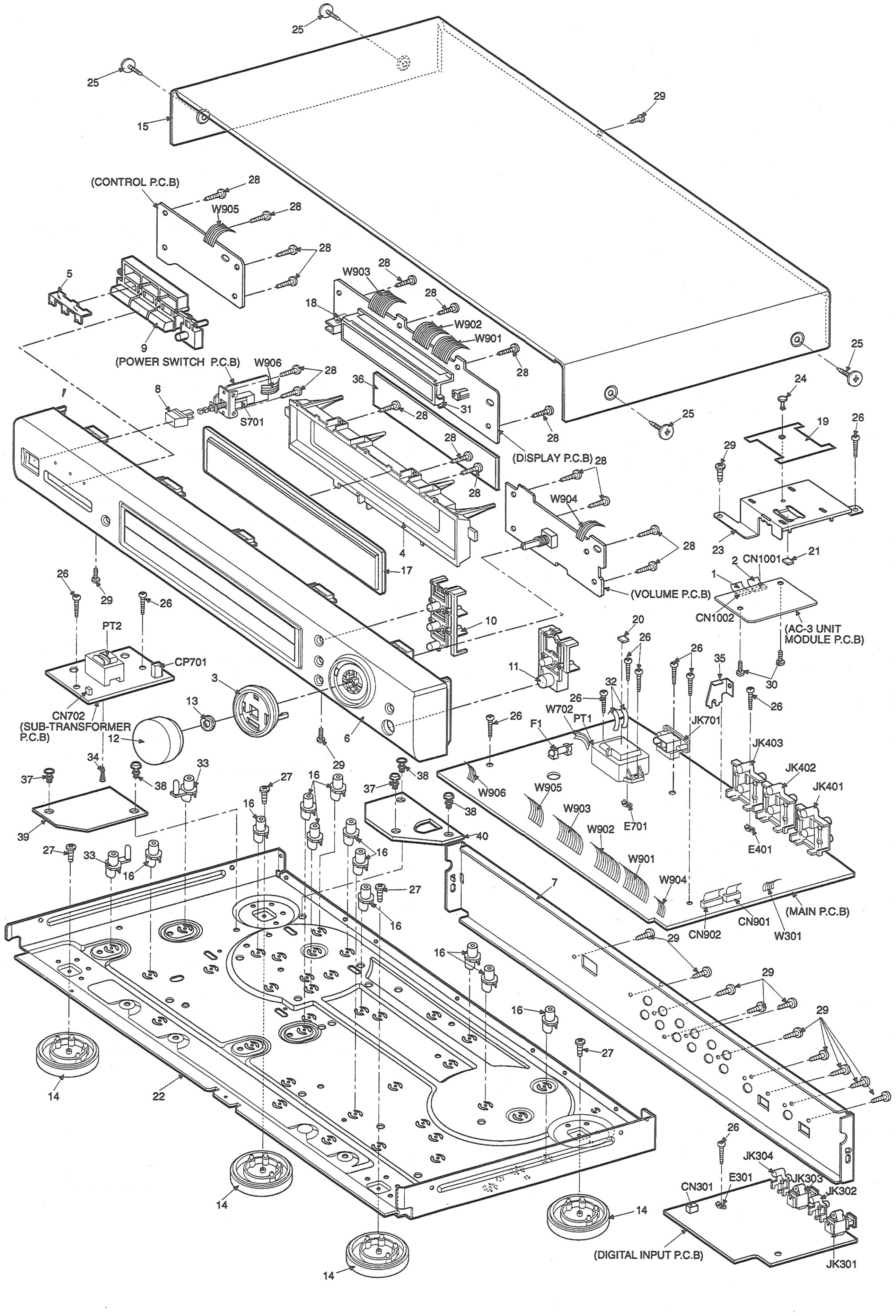
B DISPLAY P.C.B. (REP2704C-M)


C921
IC903
R927
FL901
W901
1 2 3 4 5 6 7 8 9 10 11 12
W902
1 2 3 4 5 6 7 8 9 10
W903
1 2 3 4 5 6 7 8 9 10
1
5
10
15
20
25
30
35
40
45
50
54
D913
C923
C922
C924
C925

C VOLUME P.C.B. (REP2704C-M)


S909
SP. SELECT
S908
CH. SELECT
R921
R920
W904
1 2 3 4
C
B
A
C920
C919
VR901
R919
R918
S907
STEREO
S906
DTS
S905
SURROUND

■ Cabinet Parts Location


25
25
15
29
(CONTROL P.C.B)
28
W905
28
28
5
W903
28
18
28
W902
W901
9
(POWER SWITCH P.C.B)
W906
28
36
28
25
24
25
8
S701
31
28
28
19
26
29
(DISPLAY P.C.B)
28
28
W904
28
4
23
2
CN1001
21
17
(VOLUME P.C.B)
1
26
29
26
10
CN1002
(AC-3 UNIT MODULE P.C.B)
PT2
CP701
20
26
26
35
11
30
3
32
26
W702
PT1
JK701
26
CN702
(SUB-TRANSFORMER P.C.B)
13
F1
12
6
JK403
34
29
JK402
33
37
38
27
16
37
38
JK401
W906
W905
16
W903
38
39
40
W902
E701
16
E401
27
33
16
W901
7
27
W904
16
(MAIN P.C.B)
CN901
CN902
29
W301
16
29
29
16
27
14
22
29
26
JK304
E301
JK303
CN301
JK302
14
14
(DIGITAL INPUT P.C.B)
JK301
14

■ Replacement Parts List

Notes: * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indication can be used for all areas.
* [M] in Remarks column indicates parts that are supplied by **MESA**.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REE0785-1	FFC	[M]
2	REE0786-1	FFC	[M]
3	RGK0747-S	VOL RING	[M]
4	RGK0920-K	WINDOW STAGE	[M]
5	RGL0369-Q	PANEL LIGHT	[M]
6	RFKGAC500DEK	FRONT PANEL ASS'Y	[M]
7	RGR0181J-A	REAR PANEL	[M]E
7	RGR0181J-B	REAR PANEL	[M]EB
8	RGU0890-1K	BUTTON	[M]
9	RGU1541A-2K	BUTTON (L)	[M]
10	RGU1542-1K	BUTTON (C)	[M]
11	RGU1543-1K	BUTTON (R)	[M]
12	RGW0229-K	KNOB	[M]
13	RHN90001	M9 NUT	[M]
14	RKA0079-A	LEG UNIT	[M]
15	RKM0032-K2J	TOP CABINET	[M]
16	RKQ0089-J	PCB HOLDER	[M]
17	RKW0518-Q	FL WINDOW	[M]
18	RMN0447	LED SUPPORT	[M]
19	RMA1098	HOLDING PLATE	[M]
20	RMG0145	TRANSFORMER RUBBER	[M]
21	RKW0519B-R	FL FILTER	[M]
22	RMK0174-7	BOTTOM CHASSIS	[M]
23	RSC0482A	SHIELD	[M]
24	SHR9112	PLASTIC RIVET	[M]
25	SNE2129-1	SCREW (CABINET)	[M]
26	XTB3+20JFZ	SCREW	[M]
27	XTB3+6G	SCREW	[M]
28	XTBS26+10J	SCREW	[M]
29	XTBS3+8JFZ1	SCREW	[M]
30	XYN26+C6	SCREW	[M]
31	RMN0372	FL HOLDER	[M]
32	REZ1122	WIRE	[M]
33	RMN0392	PCB SUPPORT	[M]
34	RMNX0019	LOCKING SUPPORT	[M]
35	RSC0382	SHIELD PLATE	[M]
36	RMV0181	DUST BARRIER	[M]
37	RMR1227-W	NYLON RIVET	[M]
38	RMR1228-K	NYLON RIVET	[M]
39	RMZ0501	BARRIER (A)	[M]
40	RMZ0488	BARRIER	[M]
		INTEGRATED CIRCUITS	
IC301	TC4052BP	IC, ANALOG SW	[M]
IC401	TC9162AN	IC, SELECTOR	[M]
IC451	NJM4580DD	IC, OP AMP	[M]
IC452	NJM4580DD	IC, OP AMP	[M]
IC453	NJM4580DD	IC, OP AMP	[M]
IC501	TC9212P	IC, CMOS	[M]
IC502	NJM2060D	IC, OP AMP	[M]
IC551	TC9212P	IC, CMOS	[M]
IC552	NJM2060D	IC, OP AMP	[M]
IC701	BA033T	IC, 3.3V REGULATOR	[M] ⚠
IC901	M38B53M4057F	IC, MICOM	[M]
IC902	BR93LC46	IC, EEPROM	[M]
IC903	RCD12042TE	IC, REMOTE SENSOR	[M]
IC1001	CS4926-CL	IC, AC3	[M]
IC1002	MX23C4000MC1	IC, MEMORY	[M]
IC1003	CS4226-KQ	IC, DIR/DAC/VOL	[M]
IC1004	TC74VHC574FL	IC, OCTAL BUS BUFFER	[M]
IC1005	TC74VHC574FL	IC, OCTAL BUS BUFFER	[M]
IC1006	TC74VHC244FL	IC, OCTAL BUS BUFFER	[M]
IC1007	TC74VHC244FL	IC, OCTAL BUS BUFFER	[M]
IC1008	TC74VHC74FEL	IC, OCTAL BUS BUFFER	[M]
IC1009	TC7SHU04F85L	IC, REGULATOR	[M] ⚠
IC1010	TC74VHC244FL	IC, OCTAL BUS BUFFER	[M]
		TRANSISTORS	
Q301	2SC1740SSTA	TRANSISTOR	[M]
Q302	2SC1740SSTA	TRANSISTOR	[M]
Q451	2SD1915FTA	TRANSISTOR	[M]
Q452	2SD1915FTA	TRANSISTOR	[M]
Q453	2SD1915FTA	TRANSISTOR	[M]
Q454	2SD1915FTA	TRANSISTOR	[M]
Q501	2SD1915FTA	TRANSISTOR	[M]
Q502	2SD1915FTA	TRANSISTOR	[M]
Q503	2SD1915FTA	TRANSISTOR	[M]
Q504	2SD1915FTA	TRANSISTOR	[M]
Q551	2SD1915FTA	TRANSISTOR	[M]
Q552	2SD1915FTA	TRANSISTOR	[M]
Q553	2SD1915FTA	TRANSISTOR	[M]
Q554	2SD1915FTA	TRANSISTOR	[M]
Q701	2SD2137PQTA	TRANSISTOR	[M]
Q702	2SD2137PQTA	TRANSISTOR	[M]
Q704	2SC1740SSTA	TRANSISTOR	[M] ⚠
Q705	2SC1740SSTA	TRANSISTOR	[M] ⚠
Q721	2SD592AQSTA	TRANSISTOR	[M] ⚠
Q722	2SA933SSTA	TRANSISTOR	[M] ⚠
Q723	2SB621AQSTA	TRANSISTOR	[M] ⚠
Q724	2SA933SSTA	TRANSISTOR	[M] ⚠
Q725	RVTDTC114YST	TRANSISTOR	[M]
Q726	RVTDTA114YST	TRANSISTOR	[M]
Q727	2SA992FEPTA	TRANSISTOR	[M] ⚠
Q728	2SA933SSTA	TRANSISTOR	[M] ⚠
Q729	2SD1450RSTTA	TRANSISTOR	[M] ⚠
Q730	2SD1450RSTTA	TRANSISTOR	[M] ⚠
Q901	RVTDTC114YST	TRANSISTOR	[M]
Q902	2SA933SSTA	TRANSISTOR	[M] ⚠
Q903	RVTDTC114YST	TRANSISTOR	[M]
Q904	RVTDTA114YST	TRANSISTOR	[M]
		DIODES	
D501	RVD1SS133TA	DIODE	[M]
D701	RL1N4003N02	DIODE	[M] ⚠
D702	RL1N4003N02	DIODE	[M] ⚠
D703	RL1N4003N02	DIODE	[M] ⚠
D704	RL1N4003N02	DIODE	[M] ⚠
D705	MTZJ6R2CTA	DIODE	[M] ⚠
D707	RL1N4003N02	DIODE	[M] ⚠
D708	MTZJ6R2ATA	DIODE	[M] ⚠
D721	RL1N4003N02	DIODE	[M] ⚠
D722	RVD1SS133TA	DIODE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
D723	RVD1SS133TA	DIODE	[M]
D724	MTZJ13BTA	DIODE	[M] ⚠
D725	RL1N4003N02	DIODE	[M] ⚠
D726	RL1N4003N02	DIODE	[M] ⚠
D727	RL1N4003N02	DIODE	[M] ⚠
D728	MTZJ27DTA	DIODE	[M] ⚠
D729	RVD1SS133TA	DIODE	[M]
D730	MTZJ4R7BTA	DIODE	[M] ⚠
D731	RVD1SS133TA	DIODE	[M]
D732	RVD1SS133TA	DIODE	[M]
D904	RVD1SS133TA	DIODE	[M]
D905	MTZJ3R9ATA	DIODE	[M] ⚠
D910	SLR325VCT31	DIODE	[M]
D911	SLR325VCT31	DIODE	[M]
D912	SLR325VCT31	DIODE	[M]
D913	LN846RPH	DIODE	[M]
		VARIABLE RESISTORS	
VR901	EVQVBXFK124B	VR, SWITCH	[M]
		SWITCHES	
S701	RSP2B023-A	SW, POWER	[M] ⚠
S901	EVQ21405R	SW, DIGITAL 1	[M]
S902	EVQ21405R	SW, DIGATAL 2	[M]
S903	EVQ21405R	SW, DIGITAL 3	[M]
S904	EVQ21405R	SW, LINE IN	[M]
S905	EVQ21405R	SW, SURROUND	[M]
S906	EVQ21405R	SW, DTS	[M]
S907	EVQ21405R	SW, STEREO	[M]
S908	EVQ21405R	SW, CH. SELECT	[M]
S909	EVQ21405R	SW, SPK. SELECT	[M]
		CONNECTORS	
CN301	RJS1A6605T1	CONNECTOR	[M]
CN702	RJS1A6603T1	3P TAPING CONNECTOR	[M]
CN901	RJS2A3316	16P CONNECTOR	[M]
CN902	RJS2A3320	20P CONNECTOR	[M]
CN1001	RJS2A4816T	16P CONNECTOR	[M]
CN1002	RJS2A4820T	20P CONNECTOR	[M]
CP701	RJP1A4103	CONNECTOR	[M]
		COILS & TRANSFORMERS	
L301	RLQZ150M-0	CHOKE COIL	[M]
L302	RLQZ150M-0	CHOKE COIL	[M]
L303	RLQZP1R0KT-Y	AXIAL COIL	[M]
L701	RLQZ271M	AC LINE COIL	[M] ⚠
L901	RLQB101KTA-Y	CHOKE COIL	[M]
L1001	RLQM2R2KT2-W	COIL	[M]
L1002	RLQM2R2KT2-W	COIL	[M]
L1003	RLQM2R2KT2-W	COIL	[M]
L1004	RLQM2R2KT2-W	COIL	[M]
PT1	RTP1K4E034	POWER TRANSFORMER	[M] ⚠
PT2	RTP1I4E003	POWER TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z301	BL02RN2R62T4	EMI BEAD CORE	[M]
Z302	BL02RN2R62T4	EMI BEAD CORE	[M]
Z303	BL02RN2R62T4	EMI BEAD CORE	[M]
Z304	BL02RN2R62T4	EMI BEAD CORE	[M]
Z305	BL02RN2R62T4	EMI BEAD CORE	[M]
Z306	BL02RN2R62T4	EMI BEAD CORE	[M]
Z307	BL02RN2R62T4	EMI BEAD CORE	[M]
		CERAMIC FILTERS	
CF901	RVBCST4R00MT	CERAMIC OSCILLATOR	[M]
		OSCILLATORS	
X1001	RSXB49M1S02T	X'TAL OSC 49.152MHZ	[M]
		DISPLAY TUBE	
FL901	RSL0262-F	FL	[M]
		FUSES	
F1	XBA2C06TB0	FUSE	[M] ⚠
		FUSE HOLDERS	
FC701	RJR0169T	FUSE HOLDER	[M]
FC702	RJR0169T	FUSE HOLDER	[M]
		JACKS	
JK301	T0RX178A	JK, OPTICAL MODULE	[M]
JK302	SJFD7-8	JK, RCA PIN	[M]
JK303	T0RX178A	JK, OPTICAL MODULE	[M]
JK304	SJFD7-8	JK, RCA PIN	[M]
JK401	SJF3069-19N	JK, RCA PIN	[M]
JK402	SJF3069-4N	JK, LINE IN	[M]
JK403	SJF3069-18N	JK, RCA PIN	[M]
JK701	SJS9236-1	JK, AC INLET	[M] ⚠
		EARTH TERMINAL	
E301	SNE1004-2	EARTH TERMINAL	[M]
E401	SNE1004-2	EARTH TERMINAL	[M]
E701	SNE1004-2	EARTH TERMINAL	[M]
		WIRES	
W301	RWJ1805100SQ	WIRE	[M]
W702	RWJ1803140SQ	WIRE	[M]
W901	RWJ1812170SS	WIRE	[M]
W902	RWJ1810170SS	WIRE	[M]
W903	RWJ1810170SS	WIRE	[M]
W904	RWJ1804200SS	WIRE	[M]
W905	RWJ1806160SS	WIRE	[M]
W906	RWJ1804160SS	4P WIRE	[M]

■ Resistors & Capacitors

Notes :
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- Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
- Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref No.	Part No.	Values & Remarks
	RESISTORS	
R301	ERDS2TJ332T	3.3K 1/4W [M]
R302	ERDS2TJ102T	1K 1/4W [M]
R303	ERDS2TJ151T	150 1/4W [M]
R304	ERDS2TJ100T	10 1/4W [M]
R305	ERDS2TJ332T	3.3K 1/4W [M]
R306	ERDS2TJ474T	470K 1/4W [M]
R307	ERDS2TJ471T	470 1/4W [M]
R308	ERDS2TJ222T	2.2K 1/4W [M]
R309	ERDS2TJ222T	2.2K 1/4W [M]
R310	ERDS2TJ223T	22K 1/4W [M]
R311	ERDS2TJ223T	22K 1/4W [M]
R321	ERDS2TJ332T	3.3K 1/4W [M]
R322	ERDS2TJ102T	1K 1/4W [M]
R323	ERDS2TJ151T	150 1/4W [M]
R324	ERDS2TJ100T	10 1/4W [M]
R401	ERDS2TJ471T	470 1/4W [M]
R402	ERDS2TJ471T	470 1/4W [M]
R403	ERDS2TJ471T	470 1/4W [M]
R404	ERDS2TJ471T	470 1/4W [M]
R405	ERDS2TJ471T	470 1/4W [M]
R406	ERDS2TJ471T	470 1/4W [M]
R407	ERDS2TJ102T	1K 1/4W [M]
R408	ERDS2TJ102T	1K 1/4W [M]
R409	ERDS2TJ103T	10K 1/4W [M]
R410	ERDS2TJ103T	10K 1/4W [M]
R411	ERDS2TJ103T	10K 1/4W [M]
R451	ERDS2TJ224T	220K 1/4W [M]
R452	ERDS2TJ224T	220K 1/4W [M]
R453	ERDS2TJ822T	8.2K 1/4W [M]
R454	ERDS2TJ822T	8.2K 1/4W [M]
R455	ERDS2TJ102T	1K 1/4W [M]
R456	ERDS2TJ102T	1K 1/4W [M]
R457	ERDS2TJ223T	22K 1/4W [M]
R458	ERDS2TJ223T	22K 1/4W [M]
R459	ERDS2TJ332T	3.3K 1/4W [M]
R460	ERDS2TJ332T	3.3K 1/4W [M]
R461	ERDS2TJ472T	4.7K 1/4W [M]
R462	ERDS2TJ472T	4.7K 1/4W [M]
R463	ERDS2TJ332T	3.3K 1/4W [M]
R464	ERDS2TJ332T	3.3K 1/4W [M]
R465	ERDS2TJ224T	220K 1/4W [M]
R466	ERDS2TJ224T	220K 1/4W [M]
R467	ERDS2TJ562T	5.6K 1/4W [M]
R468	ERDS2TJ562T	5.6K 1/4W [M]
R469	ERDS2TJ222T	2.2K 1/4W [M]
R471	ERDS2TJ331T	330 1/4W [M]
R472	ERDS2TJ331T	330 1/4W [M]
R473	ERDS2TJ331T	330 1/4W [M]
R474	ERDS2TJ331T	330 1/4W [M]
R475	ERDS2TJ224T	220K 1/4W [M]
R476	ERDS2TJ224T	220K 1/4W [M]
R477	ERDS2TJ331T	330 1/4W [M]
R478	ERDS2TJ331T	330 1/4W [M]
R479	ERDS2TJ102T	1K 1/4W [M]
R480	ERDS2TJ102T	1K 1/4W [M]
R481	ERDS2TJ102T	1K 1/4W [M]
R482	ERDS2TJ102T	1K 1/4W [M]
R483	ERDS2TJ474T	470K 1/4W [M]
R484	ERDS2TJ332T	3.3K 1/4W [M]
R491	ERDS2TJ101T	100 1/4W [M]
R492	ERDS2TJ224T	220K 1/4W [M]
R493	ERDS2TJ222T	2.2K 1/4W [M]
R494	ERDS2TJ103T	10K 1/4W [M]
R495	ERDS2TJ332T	3.3K 1/4W [M]
R501	ERDS2TJ124T	120K 1/4W [M]
R502	ERDS2TJ124T	120K 1/4W [M]
R503	ERDS2TJ102T	1K 1/4W [M]
R504	ERDS2TJ102T	1K 1/4W [M]
R506	ERDS2TJ820T	82 1/4W [M]
R507	ERDS2TJ332T	3.3K 1/4W [M]
R508	ERDS2TJ332T	3.3K 1/4W [M]
R509	ERDS2TJ224T	220K 1/4W [M]
R510	ERDS2TJ224T	220K 1/4W [M]
R511	ERDS2TJ562T	5.6K 1/4W [M]
R512	ERDS2TJ222T	2.2K 1/4W [M]
R513	ERDS2TJ153T	15K 1/4W [M]
R515	ERDS2TJ222T	2.2K 1/4W [M]
R516	ERDS2TJ182T	1.8K 1/4W [M]
R517	ERDS2TJ222T	2.2K 1/4W [M]
R518	ERDS2TJ222T	2.2K 1/4W [M]
R519	ERDS2TJ224T	220K 1/4W [M]
R520	ERDS2TJ224T	220K 1/4W [M]
R521	ERDS2TJ331T	330 1/4W [M]
R522	ERDS2TJ331T	330 1/4W [M]
R523	ERDS2TJ331T	330 1/4W [M]
R524	ERDS2TJ331T	330 1/4W [M]
R525	ERDS2TJ224T	220K 1/4W [M]
R526	ERDS2TJ224T	220K 1/4W [M]
R527	ERDS2TJ331T	330 1/4W [M]
R528	ERDS2TJ331T	330 1/4W [M]
R529	ERDS2TJ102T	1K 1/4W [M]
R530	ERDS2TJ102T	1K 1/4W [M]
R531	ERDS2TJ102T	1K 1/4W [M]
R532	ERDS2TJ102T	1K 1/4W [M]
R533	ERDS2TJ474T	470K 1/4W [M]
R551	ERDS2TJ124T	120K 1/4W [M]
R552	ERDS2TJ124T	120K 1/4W [M]
R553	ERDS2TJ102T	1K 1/4W [M]
R554	ERDS2TJ102T	1K 1/4W [M]
R555	ERDS2TJ332T	3.3K 1/4W [M]
R556	ERDS2TJ332T	3.3K 1/4W [M]
R557	ERDS2TJ224T	220K 1/4W [M]
R558	ERDS2TJ224T	220K 1/4W [M]
R559	ERDS2TJ562T	5.6K 1/4W [M]
R560	ERDS2TJ562T	5.6K 1/4W [M]
R561	ERDS2TJ153T	15K 1/4W [M]
R562	ERDS2TJ153T	15K 1/4W [M]
R563	ERDS2TJ222T	2.2K 1/4W [M]
R564	ERDS2TJ222T	2.2K 1/4W [M]
R565	ERDS2TJ222T	2.2K 1/4W [M]
R566	ERDS2TJ222T	2.2K 1/4W [M]
R567	ERDS2TJ224T	220K 1/4W [M]
R568	ERDS2TJ224T	220K 1/4W [M]
R569	ERDS2TJ331T	330 1/4W [M]
R570	ERDS2TJ331T	330 1/4W [M]
R571	ERDS2TJ331T	330 1/4W [M]
R572	ERDS2TJ331T	330 1/4W [M]
R573	ERDS2TJ473T	47K 1/4W [M]
R574	ERDS2TJ473T	47K 1/4W [M]
R575	ERDS2TJ331T	330 1/4W [M]
R576	ERDS2TJ331T	330 1/4W [M]
R577	ERDS2TJ102T	1K 1/4W [M]
R578	ERDS2TJ102T	1K 1/4W [M]
R579	ERDS2TJ102T	1K 1/4W [M]
R580	ERDS2TJ102T	1K 1/4W [M]
R581	ERDS2TJ272T	2.7K 1/4W [M]
R591	ERDS2TJ332T	3.3K 1/4W [M]
R592	ERDS2TJ332T	3.3K 1/4W [M]
R593	ERDS2TJ332T	3.3K 1/4W [M]
R594	ERDS2TJ332T	3.3K 1/4W [M]
R701	ERDS1FVJ2R2T ⚠	2.2 1/2W [M]
R702	ERDS1FVJ2R2T ⚠	2.2 1/2W [M]
R703	ERDS1FVJ3R9T ⚠	3.9 1/2W [M]
R704	ERDS1FVJ3R9T ⚠	3.9 1/2W [M]
R705	ERDS2TJ392T	3.9K 1/4W [M]
R707	ERDS2TJ182T	1.8K 1/4W [M]
R721	ERDS2TJ561T	560 1/4W [M]
R722	ERDS2TJ102T	1K 1/4W [M]
R723	ERDS2TJ153T	15K 1/4W [M]
R724	ERDS2TJ103T	10K 1/4W [M]
R725	ERDS2TJ273T	27K 1/4W [M]
R726	ERDS2TJ223T	22K 1/4W [M]
R727	ERDS2TJ272T	2.7K 1/4W [M]
R728	ERDS1FVJ102T ⚠	1K 1/2W [M]
R729	ERDS1FVJ102T ⚠	1K 1/2W [M]
R730	ERDS1FVJ102T ⚠	1K 1/2W [M]
R731	ERDS2TJ273T	27K 1/4W [M]
R732	ERDS2TJ104T	100K 1/4W [M]
R733	ERDS2TJ223T	22K 1/4W [M]
R734	ERDS2TJ223T	22K 1/4W [M]
R735	ERDS2TJ101T	100 1/4W [M]
R736	ERDS2TJ101T	100 1/4W [M]
R737	ERDS1FVJ4R7T ⚠	4.7 1/2W [M]
R901	ERDS2TJ102T	1K 1/4W [M]

Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks
R902	ERDS2TJ102T	1K 1/4W [M]	R1011	ERJ3GEYJ102Z	1K 1/16W[M]	R1066	ERJ3GEYJ102Z	1K 1/16W[M]	C411	ECBT1H101KB5	100P 50V [M]
R903	ERDS2TJ102T	1K 1/4W [M]	R1012	ERJ3GEYJ104Z	100K 1/16W[M]	R1067	ERJ3GEYJ102Z	1K 1/16W[M]	C412	ECEA0JKA470B	47 6.3V [M]
R904	ERDS2TJ104T	100K 1/4W [M]	R1013	ERJ3GEYJ102Z	1K 1/16W[M]	R1068	ERJ3GEYJ330V	33 1/16W[M]	C451	ECBT1H471KB5	470P 50V [M]
R905	ERDS2TJ104T	100K 1/4W [M]	R1014	ERJ3GEYJ102Z	1K 1/16W[M]	R1069	ERJ3GEYJ102Z	1K 1/16W[M]	C452	ECBT1H471KB5	470P 50V [M]
R906	ERDS2TJ104T	100K 1/4W [M]	R1015	ERJ3GEYJ102Z	1K 1/16W[M]	R1070	ERJ3GEYJ102Z	1K 1/16W[M]	C453	ECA1EPXS100B	10 25V [M]
R907	ERDS2TJ104T	100K 1/4W [M]	R1016	ERJ3GEYJ102Z	1K 1/16W[M]	R1071	ERJ3GEYJ472V	4.7K 1/16W[M]	C454	ECA1EPXS100B	10 25V [M]
R908	ERDS2TJ103T	10K 1/4W [M]	R1017	ERJ3GEYJ102Z	1K 1/16W[M]	R1072	ERJ3GEYJ102Z	1K 1/16W[M]	C455	ECBT1H220J5	22P 50V [M]
R909	ERDS2TJ104T	100K 1/4W [M]	R1018	ERJ3GEYJ102Z	1K 1/16W[M]	R1073	ERJ3GEYJ102Z	1K 1/16W[M]	C456	ECBT1H220J5	22P 50V [M]
R910	ERDS2TJ472T	4.7K 1/4W [M]	R1019	ERJ3GEYJ102Z	1K 1/16W[M]	R1074	ERJ3GEYJ472V	4.7K 1/16W[M]	C457	ECFR1E222KR	2200P 25V [M]
R911	ERDS2TJ332T	3.3K 1/4W [M]	R1020	ERJ3GEYJ102Z	1K 1/16W[M]	R1075	ERJ3GEYJ472V	4.7K 1/16W[M]	C458	ECFR1E222KR	2200P 25V [M]
R912	ERDS2TJ104T	100K 1/4W [M]	R1021	ERJ3GEYJ473V	47K 1/16W[M]	R1076	ERJ3GEYJ472V	4.7K 1/16W[M]	C459	ECCR1H391J5	390P 50V [M]
R913	ERDS2TJ103T	10K 1/4W [M]	R1022	ERJ3GEYJ1R5V	1.5 1/16W[M]	R1077	ERJ3GEYJ472V	4.7K 1/16W[M]	C460	ECCR1H391J5	390P 50V [M]
R914	ERDS2TJ102T	1K 1/4W [M]	R1023	ERJ3GEYJ102Z	1K 1/16W[M]	R1078	ERJ3GEYJ472V	4.7K 1/16W[M]	C461	ECA1EPXS100B	10 25V [M]
R915	ERDS2TJ122T	1.2K 1/4W [M]	R1024	ERJ3GEYJ101V	100 1/16W[M]	R1079	ERJ3GEYJ472V	4.7K 1/16W[M]	C462	ECA1EPXS100B	10 25V [M]
R916	ERDS2TJ152T	1.5K 1/4W [M]	R1025	ERJ3GEYJ101V	100 1/16W[M]	R1080	ERJ3GEYJ472V	4.7K 1/16W[M]	C463	ECQV1H224JZ3	0.22 50V [M]
R917	ERDS2TJ103T	10K 1/4W [M]	R1026	ERJ3GEYJ101V	100 1/16W[M]	R1081	ERJ3GEYJ472V	4.7K 1/16W[M]	C464	ECBT1E103ZF5	0.01 25V [M]
R918	ERDS2TJ102T	1K 1/4W [M]	R1027	ERJ3GEYJ101V	100 1/16W[M]	R1083	ERJ3GEYJ101V	100 1/16W[M]	C465	ECBT1H102KB5	1000P 50V [M]
R919	ERDS2TJ122T	1.2K 1/4W [M]	R1028	ERJ3GEYJ101V	100 1/16W[M]				C466	ECBT1H102KB5	1000P 50V [M]
R920	ERDS2TJ152T	1.5K 1/4W [M]	R1029	ERJ3GEYJ101V	100 1/16W[M]		**CAPACITORS**		C467	ECBT1E103ZF5	0.01 25V [M]
R921	ERDS2TJ182T	1.8K 1/4W [M]	R1030	ERJ3GEYJ470V	47K 1/16W[M]				C468	ECBT1E103ZF5	0.01 25V [M]
R922	ERDS2TJ473T	47K 1/4W [M]	R1031	ERJ3GEYJ470V	47K 1/16W[M]	C301	ECBT1E223ZF5	0.022 25V [M]	C469	ECA1EPXS100B	10 25V [M]
R923	ERDS2TJ473T	47K 1/4W [M]	R1032	ERJ3GEYJ470V	47K 1/16W[M]	C302	ECBT1H390J5	39P 50V [M]	C470	ECA1EPXS100B	10 25V [M]
R924	ERDS2TJ181T	180 1/4W [M]	R1033	ERJ3GEYJ102Z	1K 1/16W[M]	C303	ECBT1E103ZF5	0.01 25V [M]	C491	ECBT1H102KB5	1000P 50V [M]
R925	ERDS2TJ181T	180 1/4W [M]	R1034	ERJ3GEYJ330V	33 1/16W[M]	C304	ECBT1E103ZF5	0.01 25V [M]	C492	ECA1HPXS4R7B	4.7 50V [M]
R926	ERDS2TJ181T	180 1/4W [M]	R1041	ERJ3GEYJ102Z	1K 1/16W[M]	C305	ECBT1E103ZF5	0.01 25V [M]	C493	ECFR1E333KR	0.033 25V [M]
R927	ERDS2TJ181T	180 1/4W [M]	R1042	ERJ3GEYJ102Z	1K 1/16W[M]	C306	ECBT1H102KB5	1000P 50V [M]	C494	ECQV1H823JZ3	0.082 50V [M]
R928	ERDS2TJ271T	270 1/4W [M]	R1043	ERJ3GEYJ102Z	1K 1/16W[M]	C307	ECBT1H102KB5	1000P 50V [M]	C501	ECBT1H102KB5	1000P 50V [M]
R929	ERDS2TJ121T	120 1/4W [M]	R1044	ERJ3GEYJ102Z	1K 1/16W[M]	C308	ECBT1H102KB5	1000P 50V [M]	C503	ECA1HPXS4R7B	4.7 50V [M]
R930	ERDS2TJ473T	47K 1/4W [M]	R1045	ERJ3GEYJ102Z	1K 1/16W[M]	C309	ECBT1E103ZF5	0.01 25V [M]	C504	ECA1HPXS4R7B	4.7 50V [M]
R931	ERDS2TJ104T	100K 1/4W [M]	R1046	ERJ3GEYJ102Z	1K 1/16W[M]	C310	ECBT1E223ZF5	0.022 25V [M]	C505	ECA1HPXS4R7B	4.7 50V [M]
R932	ERDS2TJ101T	100 1/4W [M]	R1047	ERJ3GEYJ102Z	1K 1/16W[M]	C321	ECBT1E223ZF5	0.022 25V [M]	C506	ECA1HPXS4R7B	4.7 50V [M]
R933	ERDS2TJ101T	100 1/4W [M]	R1048	ERJ3GEYJ102Z	1K 1/16W[M]	C322	ECBT1H150J5	15P 50V [M]	C507	ECA1EPXS100B	10 25V [M]
R934	ERDS2TJ101T	100 1/4W [M]	R1049	ERJ3GEYJ100V	10 1/16W[M]	C323	ECBT1E103ZF5	0.01 25V [M]	C508	ECA1EPXS100B	10 25V [M]
R935	ERDS2TJ101T	100 1/4W [M]	R1050	ERJ3GEYJ472V	4.7K 1/16W[M]	C324	ECBT1E103ZF5	0.01 25V [M]	C509	ECA1HPXS4R7B	4.7 50V [M]
R936	ERDS2TJ101T	100 1/4W [M]	R1051	ERJ3GEYJ472V	4.7K 1/16W[M]	C325	ECBT1E103ZF5	0.01 25V [M]	C510	ECA1HPXS4R7B	4.7 50V [M]
R937	ERDS2TJ101T	100 1/4W [M]	R1052	ERJ3GEYJ472V	4.7K 1/16W[M]	C326	ECBT1E103ZF5	0.01 25V [M]	C511	ECCR1H331J5	330P 50V [M]
R938	ERDS2TJ101T	100 1/4W [M]	R1053	ERJ3GEYJ472V	4.7K 1/16W[M]	C327	ECBT1H220J5	22P 50V [M]	C512	ECFR1E223KR	0.022 25V [M]
R939	ERDS2TJ101T	100 1/4W [M]	R1054	ERJ3GEYJ472V	4.7K 1/16W[M]	C329	ECBT1H101KB5	100P 50V [M]	C513	ECCR1H331J5	330P 50V [M]
R940	ERDS2TJ101T	100 1/4W [M]	R1055	ERJ3GEYJ330V	33 1/16W[M]	C401	ECBT1H221KB5	220P 50V [M]	C515	ECA1EPXS100B	10 25V [M]
R941	ERDS2TJ104T	100K 1/4W [M]	R1057	ERJ3GEYJ330V	33 1/16W[M]	C402	ECBT1H221KB5	220P 50V [M]	C516	ECA1EPXS100B	10 25V [M]
R942	ERDS2TJ101T	100 1/4W [M]	R1058	ERJ3GEY0R00V	0 1/16W[M]	C403	ECBT1H221KB5	220P 50V [M]	C517	ECBT1H102KB5	1000P 50V [M]
R943	ERDS2TJ101T	100 1/4W [M]	R1059	ERJ3GEYJ330V	33 1/16W[M]	C404	ECBT1H221KB5	220P 50V [M]	C518	ECBT1H102KB5	1000P 50V [M]
R944	ERDS2TJ101T	100 1/4W [M]	R1060	ERJ3GEYJ102Z	1K 1/16W[M]	C405	ECBT1H221KB5	220P 50V [M]	C519	ECBT1E103ZF5	0.01 25V [M]
R945	ERDS2TJ101T	100 1/4W [M]	R1061	ERJ3GEYJ104Z	100K 1/16W[M]	C406	ECBT1H221KB5	220P 50V [M]	C521	ECBT1E103ZF5	0.01 25V [M]
R946	ERDS2TJ101T	100 1/4W [M]	R1062	ERJ3GEYJ102Z	1K 1/16W[M]	C407	ECA1HPXS4R7B	4.7 50V [M]	C522	ECBT1E103ZF5	0.01 25V [M]
R947	ERDS2TJ101T	100 1/4W [M]	R1063	ERJ3GEYJ104Z	100K 1/16W[M]	C408	ECA1HPXS4R7B	4.7 50V [M]	C523	ECBT1E103ZF5	0.01 25V [M]
R948	ERDS2TJ101T	100 1/4W [M]	R1064	ERJ3GEYJ103Z	10K 1/16W[M]	C409	ECBT1H101KB5	100P 50V [M]	C524	ECBT1E103ZF5	0.01 25V [M]
R949	ERDS2TJ101T	100 1/4W [M]	R1065	ERJ3GEYJ103Z	10K 1/16W[M]	C410	ECBT1H101KB5	100P 50V [M]	C551	ECBT1H102KB5	1000P 50V [M]

Ref No.	Part No.	Values & Remarks
C552	ECBT1H102KB5	1000P 50V [M]
C553	ECA1HPXS4R7B	4.7 50V [M]
C554	ECA1HPXS4R7B	4.7 50V [M]
C555	ECA1HPXS4R7B	4.7 50V [M]
C556	ECA1HPXS4R7B	4.7 50V [M]
C557	ECA1EPXS100B	10 25V [M]
C558	ECA1EPXS100B	10 25V [M]
C559	ECA1HPXS4R7B	4.7 50V [M]
C560	ECA1HPXS4R7B	4.7 50V [M]
C561	ECCR1H331J5	330P 50V [M]
C562	ECCR1H331J5	330P 50V [M]
C563	ECCR1H331J5	330P 50V [M]
C564	ECCR1H331J5	330P 50V [M]
C565	ECA1EPXS100B	10 25V [M]
C566	ECA1EPXS100B	10 25V [M]
C567	ECBT1H102KB5	1000P 50V [M]
C568	ECBT1H102KB5	1000P 50V [M]
C569	ECBT1E103ZF5	0.01 25V [M]
C571	ECBT1E103ZF5	0.01 25V [M]
C572	ECBT1E103ZF5	0.01 25V [M]
C573	ECBT1E103ZF5	0.01 25V [M]
C574	ECBT1E103ZF5	0.01 25V [M]
C575	ECA1EPXS100B	10 25V [M]
C576	ECA1EPXS100B	10 25V [M]
C581	ECBT1H101KB5	100P 50V [M]
C582	ECBT1H101KB5	100P 50V [M]
C583	ECBT1H101KB5	100P 50V [M]
C584	ECBT1H101KB5	100P 50V [M]
C701	ECBT1H104ZF5	0.1 50V [M]
C702	ECBT1H104ZF5	0.1 50V [M]
C703	ECEA1CU472E ⚠	4700 16V [M]
C704	ECBT1E103ZF5	0.01 25V [M]
C705	ECEA1CKA100B	10 16V [M]
C707	ECEA1HKA010B	1 50V [M]
C708	ECA1CM471B	470 16V [M]
C709	ECBT1E103ZF5	0.01 25V [M]
C710	ECEA0JKA470B	47 6.3V [M]
C711	ECEA0JKA470B	47 6.3V [M]
C721	ECBT1E103ZF5	0.01 25V [M]
C722	ECA1VPXS102E ⚠	1000 35V [M]
C723	ECKR1H103ZF5	0.01 50V [M]
C724	ECEA1CKA220B	22 16V [M]
C725	ECA1VPXS471E	470 35V [M]
C726	ECKR1H103ZF5	0.01 50V [M]
C727	ECEA1CKA100B	10 16V [M]
C728	ECEA1CKA100B	10 16V [M]
C729	ECA1VM101B ⚠	100 35V [M]
C730	ECA1JM101B	01 6.3V [M]
C731	ECKR1H103ZF5	0.01 50V [M]
C732	ECEA1VKA100B	10 35V [M]
C733	ECEA1VKA100B	10 35V [M]
C734	ECBT1H104ZF5 ⚠	0.1 50V [M]
C735	ECBT1E103ZF5 ⚠	0.01 25V [M]
C901	ECBT1H104ZF5	0.1 50V [M]
C902	ECEA0JKA101B	100 6.3V [M]
C903	ECBT1E103ZF5	0.01 25V [M]
C904	ECEA0JKA101B	100 6.3V [M]
C905	ECBT1H331KB5	330P 50V [M]
C906	ECBT1H331KB5	330P 50V [M]
C907	ECBT1H331KB5	330P 50V [M]
C908	ECBT1H331KB5	330P 50V [M]
C909	ECBT1H331KB5	330P 50V [M]
C910	ECBT1H331KB5	330P 50V [M]
C911	ECBT1H331KB5	330P 50V [M]
C912	ECBT1H331KB5	330P 50V [M]
C913	ECBT1H331KB5	330P 50V [M]
C914	ECBT1H331KB5	330P 50V [M]
C915	ECEA1HKA010B	1 50V [M]
C916	ECEA1HKA010B	1 50V [M]
C917	ECBT1E103ZF5	0.01 25V [M]
C918	ECBT1E103ZF5	0.01 25V [M]
C919	ECBT1H101KB5	100P 50V [M]
C920	ECBT1H101KB5	100P 50V [M]
C921	ECEA1CKA100B	10 16V [M]
C922	ECEA1VKA220B	22 35V [M]
C923	ECEA1VKA220B	22 35V [M]
C924	ECEA1VKA220B	22 35V [M]
C925	ECEA1VKA220B	22 35V [M]
C926	ECBT1E103ZF5	0.01 25V [M]
C927	ECBT1E103ZF5	0.01 25V [M]
C928	ECBT1H104ZF5	0.1 50V [M]
C931	ECBT1E103ZF5	0.01 25V [M]
C1027	ECEV0JA101P	100P 6.3V [M]
C1028	ECUVNC104ZFV	0.1 16V [M]
C1029	ECUV1E103KBV	0.01 25V [M]
C1030	ECUV1H152KBV	1500P 50V [M]
C1031	ECEV0JA101P	100P 6.3V [M]
C1032	ECUVNC104ZFV	0.1 16V [M]
C1033	ECUV1H101JCV	100P 50V [M]
C1035	ECUV1H101JCV	100P 50V [M]
C1036	ECUV1H102KBV	1000P 50V [M]
C1037	ECUV1H102KBV	1000P 50V [M]
C1038	ECUV1H102KBV	1000P 50V [M]
C1041	ECUV1H102KBV	1000P 50V [M]
C1042	ECUV1H102KBV	1000P 50V [M]
C1051	ECEV0JA101P	100P 6.3V [M]
C1052	ECEV0JA101P	100P 6.3V [M]
C1053	ECEV0JA101P	100P 6.3V [M]
C1054	ECUVNC104ZFV	0.1 16V [M]
C1055	ECEV0JA101P	100P 6.3V [M]
C1056	ECUVNC104ZFV	0.1 16V [M]
C1057	ECEV0JA101P	100P 6.3V [M]
C1058	ECUVNC104ZFV	0.1 16V [M]
C1059	ECEV0JA101P	100P 6.3V [M]
C1060	ECUVNC104ZFV	0.1 16V [M]
C1061	ECUVNC224KBN	0.22 16V [M]
C1062	ECUVNC104ZFV	0.1 16V [M]
C1063	ECUVNC104ZFV	0.1 16V [M]
C1064	ECUVNC104ZFV	0.1 16V [M]
C1065	ECUVNC104ZFV	0.1 16V [M]
C1066	ECUVNC104ZFV	0.1 16V [M]
C1067	ECUVNC104ZFV	0.1 16V [M]
C1068	ECUVNC104ZFV	0.1 16V [M]
C1069	ECUV1H102KBV	1000P 50V [M]
C1070	ECUV1H102KBV	1000P 50V [M]
C1071	ECUVNC104ZFV	0.1 16V [M]
C1072	ECUV1H101JCV	100P 50V [M]
C1073	ECUV1H101JCV	100P 50V [M]
C1074	ECUVNC104ZFV	0.1 16V [M]
C1075	ECUV1H102KBV	1000P 50V [M]
C1076	ECUV1H102KBV	1000P 50V [M]
C1077	ECUV1H101JCV	100P 50V [M]

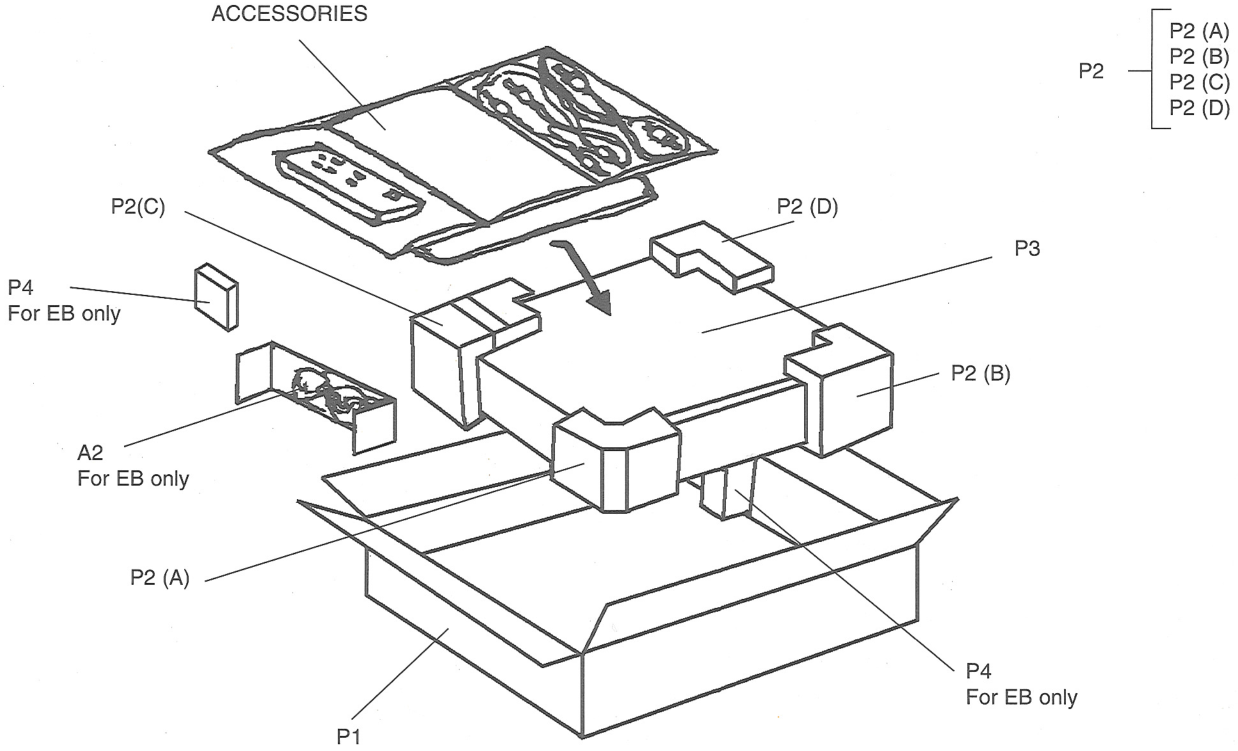
Packing Materials & Accessories

Notes :
- * Important safety notice :
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors),etc. are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- * The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
- * Parts without these indication can be used for all areas.
- * The " (SF) " mark denotes standard part.
- * [M] in Remarks column indicates parts supplied by **MESA**.
- * Remote Control Unit : Supply period for three years from termination of production.
- * Reference for O/I book languages are as follows :

Ar : Arabic	Cf : Canadian French	Co : Chinese (old)	Cn : Chinese (new)	Cz : Czech	Da : Danish
Du : Dutch	En : English	Fr : French	Ge : German	It : Italian	Ko : Korean
Po : Polish	Ru : Russian	Sp : Spanish	Sw : Swedish		

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG4464	PACKING CASE	[M]E
P1	RPG4465	PACKING CASE	[M]EB
P2	RPN1058	POLYFOAM	[M]
P3	SPP740-1	BAG	[M]
P4	RPN1078	CUSHION	[M]EB
		ACCESSORIES	
A1	EUR645410	REMOTE CONTROL	[M]
A1-1	UR64EC1822H	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF) ⚠	[M]E
A2	VJA0733	AC CORD (SF) ⚠	[M]EB
A3	SJP2281	OPTICAL CABLE	[M]
A4	RJL1P021B08	1P CORD	[M]
A5	RJL2P004B08A	STEREO CABLE	[M]
A6	RQT5023-E	O/I (En/Sp/Sw/Po/Cz/Ru)	[M]E
A6	RQT5024-D	O/I BOOK (Ge/It/Fr)	[M]E
A6	RQT5025-H	O/I BOOK (Du/Da)	[M]E
A6	RQT5026-B	O/I BOOK (En)	[M]EB

Packaging



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